COLOR TELEVISION RECEIVER

Chassis : KS7D(N)_Timecop
Model : CL29Z40MQTXXAO

SERVICE Manual

COLOR TELEVISION RECEIVER

CL-29Z40MQ

FEATURES

- GREEN CRT
- Turbo Voice

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1. Precaution

To avoid possible damages or electric shocks or exposure to radiation, follow the instructions below with regard to safety, installation, service and ESD.

1-1 Safety Precautions

1. Make sure all protective devices are properly installed including non-metallic handles and compartment covers when installing or re-installing the chassis or chassis assemblies.

2. Make sure that no gaps exist between the cabinets for children to insert their fingers in to prevent children from receiving electric shocks. Gaps mentioned above include ventilation holes of a too great magnitude between the vaccum tube and the cabinet mask, and the improper installation of the rear cabinet.

   Errors may occur when the resistance is below 1.0 MΩ or over 5.2 MΩ.
   In these cases, make sure that the device is repaired before sending it back to the customer.

3. Check for Electricity Leakage (Figure 1-1)
   Warning: Do not use an insulated transformer for checking the leakage. Use only those current leakage testers or mirroring systems that comply with ANSIC 101.1 and the Underwriter Laboratory's specifications (UL1410, 59.7).

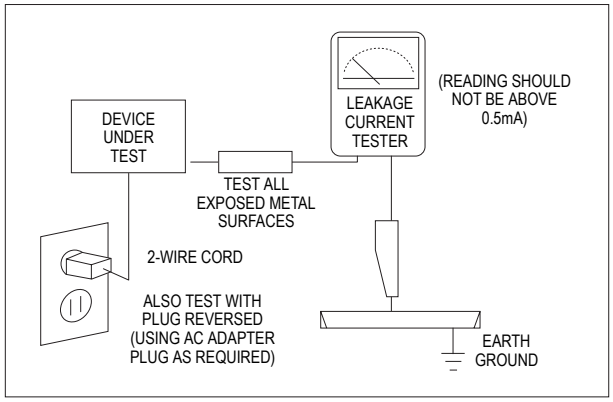

LEAKAGE CURRENT TESTER
(READING SHOULD NOT BE ABOVE 0.5mA)
DEVICE UNDER TEST
TEST ALL EXPOSED METAL SURFACES
2-WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUG AS REQUIRED)
EARTH GROUND

Fig. 1-1 AC Leakage Test

4. A high voltage is maintained within the specified limits using safety parts, calibration and tolerances. When voltage exceeds the specified limits, check each special part.

5. Warning for Engineering Changes:
   Never make any changes or additions to the circuit design or the internal part for this product.
   Ex: Do not add any audio or video accessory connectors. This might cause physical damage. Furthermore, any changes or additions to the original design/engineering will invalidate the warranty.

6. Warning - Hot Chassis:
   Some TV chassis are directly connected to one end of the AC power cord for electrical reasons.
   Without insulated transformers, the product can only be repaired safely when the chassis is connected to the earthed end of the AC power source.

   To make sure the AC power cord is properly connected, follow the instructions below. Use the voltmeter to measure the voltage between the chassis and the earthed ground. If the measurement is over 1.0V, unplug the AC power cord and change the polarity before re-inserting it. Measure the voltage between the chassis and the ground again.

7. Some TV chassis are shipped with an additional secondary grounding system. The secondary system is adjacent to the AC power line. These two grounding systems are separated in the circuit using an unbreakable/unchangeable insulation material.

8. When any parts, material or wiring appear overheated or damaged, replace them with new regular ones immediately. When any damage or overheating is detected, correct this immediately and make a regular check of possible errors.

9. Check for the original shape of the lead, especially that of the antenna wiring, any sharp edges, the AC power and the high voltage power. Carefully check if the wiring is too tight, incorrectly placed or loose. Never change the space between the part and the printed circuit board. Check the AC power cord for possible damages. Keep the part or the lead away from any heat-emitting materials.

10. Safety Indication:
    Some electrical circuits or device related materials require special attention to their safety features, which cannot be viewed by the naked eye. If an original part is replaced with another irregular one, the safety or protective features will be lost even if the new one has a higher voltage or more watts.

    Critical safety parts should be bracketed with ( ). Use only regular parts for replacements (in particular, flame resistance and dielectric strength specifications). Irregular parts or materials may cause electric shock or fire.

1-2 Servicing Precautions

Warning 1: First carefully read the "Safety Instruction" in this service manual.
When there is a conflict between the service and the safety instructions, follow the safety instruction at all times.

Warning 2: Any electrolytic capacitor with the wrong polarity will explode.

1. The service instructions are printed on the cabinet, and should be followed by any service personnel.

2. Make sure to unplug the AC power cord from the power source before starting any repairs.
   (a) Remove or re-install parts or assemblies.
   (b) Disconnect the electric plug or connector, if any.
   (c) Connect the test part in parallel with the electrolytic capacitor.

3. Some parts are placed at a higher position than the printed board. Insulated tubes or tapes are used for this purpose. The internal wiring is clamped using buckles to avoid contact with heat emitting parts. These parts are installed back to their original position.

4. After the repair, make sure to check if the screws, parts or cables are properly installed. Make sure no damage is caused to the repaired part and its surroundings.

5. Check for insulation between the blade of the AC plug and that of any conductive materials (i.e. the metal panel, input terminal, earphone jack, etc).

6. Insulation Check Process: Unplug the power cord from the AC source and turn the switch on. Connect the insulating resistance meter (500v) to the AC plug blade.

   The insulating resistance between the blade of the AC plug and that of the conductive material should be more than 1 MΩ.

7. Any B+ interlock should not be damaged.
   If the metal heat sink is not properly installed, no connection to the AC power should be made.

8. Make sure the grounding lead of the tester is connected to the chassis ground before connecting to the positive lead. The ground lead of the tester should be removed last.

9. Beware of risks of any current leakage coming into contact with the high-capacity capacitor.

10. The sharp edges of the metal material may cause physical damage, so ensure wearing protective gloves during the repair.

1-3 Static Electricity Precautions

1. Some semi-conductive ("solid state") devices are vulnerable to static electricity. These devices are known as ESD. ESD includes the integrated circuit and the field effect transistor. To avoid any materials damage from electrostatic shock, follow the instructions described below.

2. Remove any static electricity from your body by connecting the earth ground before handling any semi-conductive parts or ass'ys. Alternatively, wear a dischargeable wrist-belt.
   (Make sure to remove any static electricity before connecting the power source - this is a safety instruction for avoiding electric shock)

3. Remove the ESD ass'y and place it on a conductive surface such as aluminum foil to prevent accumulating static electricity.

4. Do not use any Freon-based chemicals.
   Such chemicals will generate static electricity that causes damage to the ESD.

5. Use only grounded-tip irons for soldering purposes.

6. Use only anti-static solder removal devices.
   Most solder removal devices do not support an anti-static feature. A solder removal device without an anti-static feature can store enough static electricity to cause damage to the ESD.

7. Do not remove the ESD from the protective box until the replacement is ready. Most ESD replacements are covered with lead, which will cause a short to the entire unit due to the conductive foam, aluminum foil or other conductive materials.

8. Remove the protective material from the ESD replacement lead immediately after connecting it to the chassis or circuit ass'y.

9. Take extreme caution in handling any uncovered ESD replacements. Actions such as brushing clothes or lifting your leg from the carpet floor can generate enough static electricity to damage the ESD.

CAUTION

These servicing instructions are for use by qualified service personnel only.
To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

1-4 Installation Precautions

1. For safety reasons, more than two people are required for carrying the product.

2. Keep the power cord away from any heat emitting devices, as a melted covering may cause fire or electric shock.

3. Do not place the product in areas with poor ventilation such as a bookshelf or closet. The increased internal temperature may cause fire.

4. Bend the external antenna cable when connecting it to the product. This is a measure to protect it from being exposed to moisture. Otherwise, it may cause a fire or electric shock.

5. Make sure to turn the power off and unplug the power cord from the outlet before repositioning the product. Also check the antenna cable or the external connectors if they are fully unplugged. Damage to the cord may cause fire or electric shock.

6. Keep the antenna far away from any high-voltage cables and install it firmly. Contact with the high-voltage cable or the antenna falling over may cause fire or electric shock.

7. Check the basics of the screen test.
   - Image position/size, Tilt adjustment

MEMO

2. Product Specification

2-1 Product Features

Block	Specfication	Core Parts	Remark
CRT	- 29" Slim-fit		
RF Part	- Analog Tuners	NTSC Tuner(Argemtma option)	
Power	- Input Voltage: AC100-240V(Mexico : AC127V) -Stand-By: Less than 2.6W	STR-X6750F	
Video	-1H Comb Filter -Digital Nr -BLE	VCT4822_F1	
Audio	- OutPut: 10W+10W - Fuction: Melody on/off, Turbo Voice, Auto Volume, Pseudo Stereo	VCT4822_F1 TDA7297SA (10W+10W)	
Cabinet	Front and Back Cabinets	Z30 Design Applied	Material: HIPS
Other	- Development Level : Level 4 - ProtoType Model:CL29Z30PQTXXAX - Receving(P/G) CH: VHF:2 ~ 13, UHF:14 ~ 69, CATV:1 - 125		

■ Core Parts Functions

- VCT4822_F1: Sound Processor, Video Processor, Display and Deflection Processor Controller, OSD and Text Processing
- TDA7297SA : Sound Signal Amplify
- STR-X6750F: Power Supply HIC
- TDQ-6F/13F2S (Tuner): RF signal processing , output IF signal
- TECCIO4OSL32A(E) : 2Tuner-PIP Main tuner
- TMQH2-003A,2 Tuner-PIP Sub tuner

2-2 Key Features

Model	CL-29Z40MQ
Voltage	AC100-240 V(Mexico : AC127V)
Frequency of Operation	50/60 Hz
Power Consumption	140 Watts
Dimensions (mm/inches)	36.7 x 15.9 x 22.3 inches 796 x 415 x 586 mm
Weight (Kg/ lbs)	42.0 Kg / 92.6 lbs

■ H/W Configuration
- 29" Slim fit CRT adopted

■ Picture
- System NTSC-M & Pal-M/N
- OSD: Half tone Menu
- DVD-input (Y,Pb,Pr) & S-VHS Option,
- AKB(Auto kinetic Bias)
- Comb Filter: 1H Comb filter
- Auto Peaking Control, Fine Tuneless, Group Delay Correction

■ Sound
- System: Stereo, Nicam
- Output:10W+10W
- AVL, Melody, Auto Stereo, Auto Mute, Equalizer

■ Feature
- Auto program, Sleep timer, Clock
- Caption
- Zoom, Previous channel, Blue Screen, Color Tone

■ In/Out Terminals
- Front: AV IN, S-VHS Input (Rear)
- Rear: 2 AV Input & Component video share
  1 Component Input : 480i, RF 1 Input
  1 AV Output

■ Remocon
- TM85

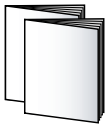
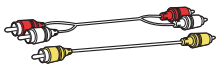
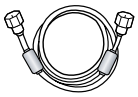
■ Power Supply
- 100V ~ 240V, (Mexico : 120V)

■ Power Comsumption
- Standy-by: Less than 2.6W
- Standard Power: 140W

2-3 Specifications Analysis

Model		CL29M6PQ	CL-29Z40MQ
Chassis		KS7A	KS7D
Design			
Picture	Screen Size	29"	29"
	CRT	FLAT	SLIM-FIT
	DNIe Jr.	■	X
	Comb Filter	1H	1H
	Velocity Modulation	O	X
	Video Noise Reduction	O	O
	Auto Kinetic Bias	O	O
	Color Tone Control	O	O
	Tilt Control	O	O
	Picture Mode	4 Mode	4 Mode
Sound	MTS/SAP	O	O
	Output Power(RMS)	15W*2	10W*2
	Tweeter	X	X
	BBE	X	X
	Surround	O	O
	Sound Mode	5 Mode	5 Mode
	Graphic Equalizer	O	X
	Sub-Woofer Speaker	X	X
	Auto Volume Leveler	O	O
	Melody On/Off	O	O
	Turbo Sound	O	O
Convenience	PIP	2T	2T
	Plug & Play	O	O
	Zoom Mode	O	O
	OSD Demo	O	O
	OSD Language	E/F/S/P	E/F/S/P
	Previous Channel	O	O
	Closed Caption	O	O
	On/Off Timer	O	O
	Sleep Timer	O	O
	Auto Power Off	O	O
	Clock	O	O
	Channel Scan	X	X
	Self-diagnostic System	X	X
	Remote Control	TM76	TM85
	Remote Surf	O	O
	Channel Labelling	O	O
	Blue Screen	O	O
	Rack	X	X
Voltage	Voltage	100~240	AC120V
Power Consumption	On	145W	140W
	Stand-by	under 3W	under 3W
Jacks	RF Input	R1	R1
	A/V Input	S1/R2	S1/R2
	Monitor Output	R1	R1
	S-VHS Input	S1/R1	S1
	Headphone	X	X
	DVD Input	O	O
	PC Input(VGA)	X	X

2-4 Accessories

Accessories		Item	Item code	Remark
Supplied Accessories		Remote Control AAA Alkaline Battery (2)	AA59-00385A 4301-000103	Samsung Service center
		Owner's Instructions Safety Guide Manual	AA68-03806A AA68-03242F	
		Warranty Card Registration Card	AA68-03727A BP68-00515A	
Accessories that can be purchased additionally		Video Cable / Audio Cable	-	Internal shopping mall
		S-Video Cable	-	
		Component Cable	-	
		Antenna Cable	-	

3. Alignment & Adjustment

3-1 Service Instruction

1. General Adjustment :
   In general, a color TV can provide ideal visual quality by adjusting the basic settings such as the vertical size, horizontal size, focus, etc.
   Display a black and white picture on the screen to check if the picture is clearly displayed.
   If there are some 'spotted' points on the screen when displaying a black and white picture, degauss the screen using the degauss coil. If the spotted points remain, re-adjust the purity and the convergence. This completes the basic performance examination.

   ⚠ Notice.
   - ■ These adjustments and the check list are only applied to KS7D chassis-applied models.
   - ■ North America use 110V, South Central America use 220v for the measurement set.
     It is recommended using an insulation transformer when supplying power to the set so as to prevent shock to the set or to yourself.
   - ■ These adjustment specifications have been created on the basis of the domestic KS7D chassis-applied remote control model. Some of the contents may be changed subject to the sales location and the product specifications.

2. When replacing the Main Board :
   Focus adjustment, screen voltage setting and W/B adjustment are all required.

3. When replacing the CRT Ass'y : No adjustments required.

4. When replacing the Side AV : No adjustments required.

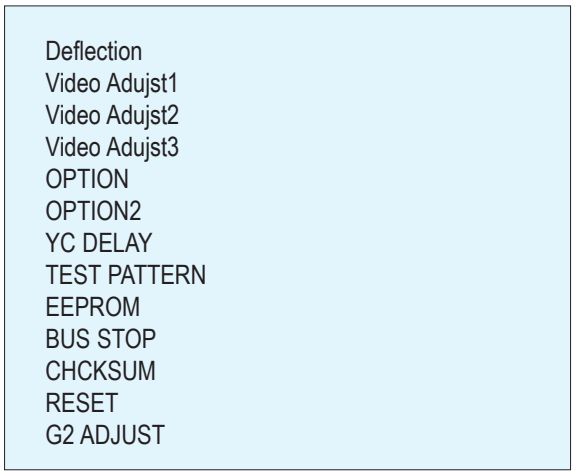
3-2 How to Access Service Mode

1. To enter Service Mode, press the keys on the remote control according to the following sequence. (in Stand-by status)

   Mute → 1 → 8 → 2 → Power On

   ※ When failing to enter Service Mode, repeat the procedure above.

2. The initial screen of Service Mode.



3. Functions of the Keys within Service Mode

MENU	Show all menus
▲ / ▼	Move the cursor to select an item.
◀ / ▶	Adjust the selected configuration value

3-3 Factory Data

★ The underlined are items applied during the service adjustment. None of the others should be adjusted.

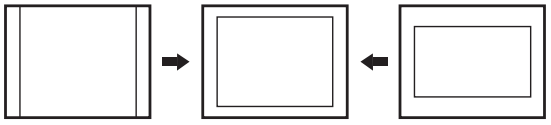
1. Deflection(NT 60Hz)

No	Item	Remark	29" SLIM	29" SLIM
			CL-29Z30PQ	CL-29Z30MQ
1	V Amp	ADJ	42	42
2	V Shift	ADJ	-24	-24
3	H EW	ADJ	-6	-6
4	H Shift	ADJ	130	130
5	V Linearity	ADJ	-3	-3
6	V SC	FIX	43	43
7	H Parabola	ADJ	78	78
8	Upper Corner	ADJ	11	11
9	Lower Corner	ADJ	-29	-29
10	Upper Corner6	FIX	-18	-18
11	Lower Corner6	FIX	3	3
12	H Trapezium	ADJ	29	29
13	Bow	ADJ	2	2
14	Angle	FIX	-1	-1
15	EHT Time	FIX	20	20
16	EHT Threshold	FIX	1	1
17	EHT Vertical	FIX	0	0
18	EHT Horizontal	FIX	24	24
19	EHT Vertical2	FIX	4	4
20	EHT Horizontal2	FIX	7	7

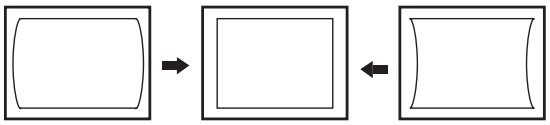
2. Deflection(PAL 50Hz)

No	Item	Remark	29" SLIM	29" SLIM
			CL-29Z30PQ	CL-29Z30MQ
1	V Amp	ADJ	4	4
2	V Shift	ADJ	-5	-5
3	H EW	ADJ	2	2
4	H Shift	ADJ	-17	-17
5	V Linearity	ADJ	0	0
6	V SC	FIX	0	0
7	H Parabola	ADJ	2	2
8	Upper Corner	ADJ	-7	-7
9	Lower Corner	ADJ	-5	-5
10	Upper Corner6	ADJ	4	4
11	Lower Corner6	ADJ	6	6
12	H Trapezium	ADJ	-8	-8
13	Bow	FIX	2	2
14	Angle	FIX	0	0
15	EHT Time	FIX	20	20
16	EHT Threshold	FIX	1	1
17	EHT Vertical	FIX	0	0
18	EHT Horizontal	FIX	24	24
19	EHT Vertical2	FIX	4	4
20	EHT Horizontal2	FIX	7	7

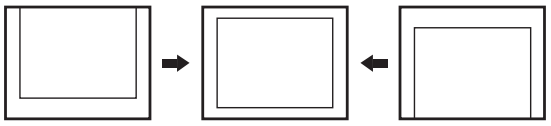
0 V-AMP



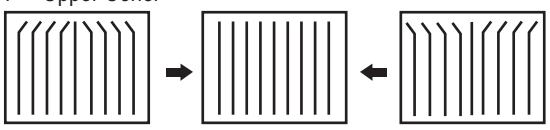
6 H-Parabola



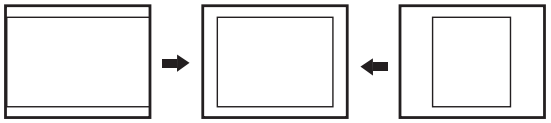
1 V-Shift



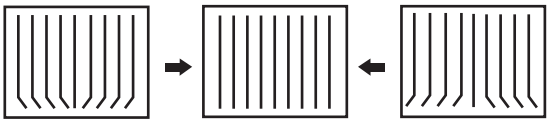
7 Upper Coner



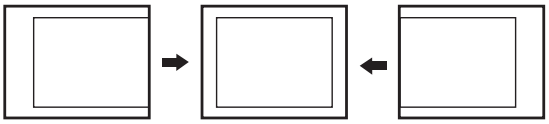
2 H EW



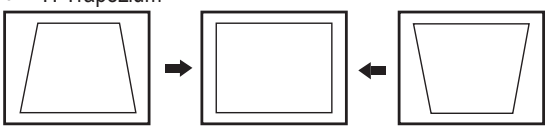
8 Low Coner



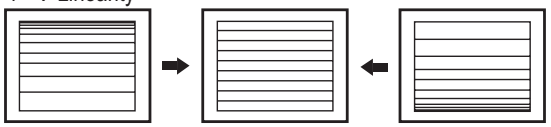
3 H-Shift



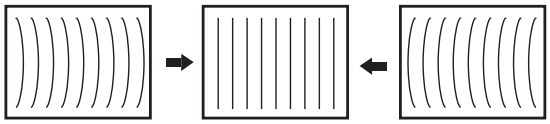
9 H-Trapezium



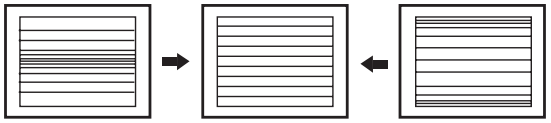
4 V-Linearity



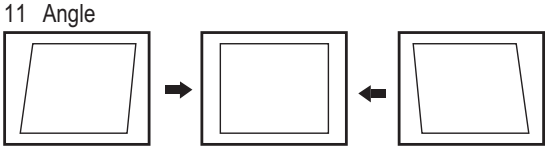
10 BOW



5 V SC



11 Angle



3. Video Adjust 1

No	Item	Remark	29" SLIM	29" SLIM
			CL-29Z30PQ	CL-29Z30MQ
1	R Cutoff	ADJ	127	127
2	G Cutoff	FIX	127	127
3	B Cutoff	ADJ	127	127
4	R Drive	ADJ	127	127
5	G Drive	FIX	127	127
6	B Drive	ADJ	127	127
7	Sub Bright	ADJ	52	52
8	Sub Contrast	ADJ	32	32
9	Sub Color	FIX	2	2
10	Sub Tint	FIX	46	46
11	AKB Option	FIX	1	1
12	BCL Threshold	FIX	19	19
13	BCL Gain	FIX	240	240
14	BCL Time	FIX	255	255
15	Sub Sharpness	FIX	12	12
16	Pilot Low	FIX	7	7
17	Pilot High	FIX	13	13
18	V-Mute(x100ms)	FIX	3	3
19	BCL TCUP	FIX	100	100

4. Video Adjust 2

No	Item	Remark	29" SLIM	29" SLIM
			CL-29Z30PQ	CL-29Z30MQ
1	VSU	FIX	2	2
2	Melody Volume	FIX	5	5
3	HB Start	FIX	159	159
4	HB Stop	FIX	149	149
5	RF AGC	FIX	4	4
6	VM Gain	FIX	0	0
7	VM Delay	FIX	0	0
8	V Peaking	FIX	12	12
9	BLE Tilt	FIX	12	12
10	BLE Gain	FIX	1	1
11	BLE Mode	FIX	2	2
12	BLE Break	FIX	1	1
13	CTI Gain	FIX	1	1
14	CTI Coring	FIX	15	15
15	LTI Gain	FIX	15	15
16	D-EHT Time	FIX	5	5
17	DCT Ratio	FIX	50	50
18	VSP COMB	FIX	3	3

5. Video Adjust 3

No	Item	Remark	29" SLIM	29" SLIM
			CL-29Z30PQ	CL-29Z30MQ
1	NR Off Value	FIX	3	3
2	Gamma Mode	FIX	1	1
3	Gamma Correction	FIX	70	70
4	BST StartPoint	FIX	145	145
5	BST Gain(B)	FIX	50	50
6	DPWL Gain	FIX	80	80
7	DPWL Start	FIX	185	185
8	PIP Contrast	FIX	8	8
9	PIP Tint	FIX	57	57
10	PIP Color	FIX	6	6
11	PIP PAL V.Pos	FIX	24	24
12	PIP NTSC V.Pos	FIX	24	24
13	PIP H.Pos	FIX	46	46
14	PIP R Cutoff	FIX	6	6
15	PIP B Cutoff	FIX	9	9
16	PIP R Drive	FIX	161	161
17	PIP B Drive	FIX	141	141

6. YC Delay

No	Item	Remark	29" SLIM	29" SLIM
			CL-29Z30PQ	CL-29Z30MQ
1	PAL Delay	FIX	0	0
2	SECAM Delay	FIX	-2	-2
3	NTSC Delay	FIX	0	0
4	PAL(AV) Delay	FIX	0	0
5	SECAM(AV) Delay	FIX	-3	-3
6	NTSC(AV) Delay	FIX	0	0

7. Test Pattern

No	Item	Remark	29" SLIM	29" SLIM
			CL-29Z30PQ	CL-29Z30MQ
1	G2 Adjust	-	-	-
2	Read Cut	-	-	-
3	Read Drive	-	-	-
4	IBRM	FIX	180	180
5	WDRM	FIX	50	50
6	CDL	FIX	254	254
7	COLR G B	FIX	50 / 50 / 50	50 / 50 / 50

8. EEPROM

No	Item	Remark	MIN	MAX	29" SLIM	29" SLIM
					CL-29Z30PQ	CL-29Z30MQ
0	Dynamic Contrast	FIX	0	255	100	100
1	Dynamic Brightness	FIX	0	255	45	45
2	Dynamic Sharpness	FIX	0	255	65	65
3	Dynamic Color	FIX	0	255	43	43
4	Dynamic Tint	FIX	0	255	50	50
5	Standard Contrast	FIX	0	255	82	82
6	Standard Brightness	FIX	0	255	45	45
7	Standard Sharpness	FIX	0	255	50	50
8	Standard Color	FIX	0	255	45	45
9	Standard Tint	FIX	0	255	50	50
10	Movie Contrast	FIX	0	255	50	50
11	Movie Brightness	FIX	0	255	55	55
12	Movie Sharpness	FIX	0	255	25	25
13	Movie Color	FIX	0	255	40	40
14	Movie Tint	FIX	0	255	50	50
15					255	255
16					255	255
17					255	255
18					255	255
19	DVD SUB TINT	FIX	0		10	10
20	16:9 V-SHIFT	FIX	0	100	15	15
21	16:9 PARAVOLA	FIX	0	100	5	5
22	PIP BRIGHTNESS	FIX	0	15	0	0
23	Double TTX Contrast	FIX			255	255
24	TTX V Position	FIX	0	255	255	255
25	TTX H Position	FIX	0	255	255	255
26	TTX Contrast	FIX	0	255	255	255
27	TTX Brightness	FIX	0	255	255	255
28	OSD Contrast	FIX	0	255	115	115
29	OSD Brightness	FIX	0	255	15	15
30	Double TTX H Position	FIX	0	255	255	255
31	Standard Equ100(Std BASS)	FIX	0	8	50	50
32	Standard Equ300(Std TREBLE)	FIX	0	13	50	50
33	Standard Equ1K(Music BASS)	FIX	0	14	85	85
34	Standard Equ3K(Music TREBLE)	FIX	0	13	70	70
35	Standard 10K(Movie BASS)	FIX	0	12	95	95
36	Music Equ100(Movie TREBLE)	FIX	0	18	50	50
37	Music Equ300(Speech BASS)	FIX	0	14	40	40

No	Item	Remark	MIN	MAX	29" SLIM	29" SLIM
					CL-29Z30PQ	CL-29Z30MQ
38	Music Equ1K(Speech TREBLE)	FIX	0	11	50	50
39	Music Equ3K	FIX	0	14	255	255
40	Music 10K	FIX	0	18	255	255
41	Movie Equ100	FIX	0	22	255	255
42	Movie Equ300	FIX	0	15	255	255
43	Movie Equ1K	FIX	0	11	255	255
44	Movie Equ3K	FIX	0	12	255	255
45	Movie 10K	FIX	0	13	255	255
46	Speech Equ100	FIX	0	6	255	255
47	Speech Equ300	FIX	0	11	255	255
48	Speech Equ1K	FIX	0	14	255	255
49	Speech Equ3K	FIX	0	13	255	255
50	Speech 10K	FIX	0	11	255	255
51	Brightness(RGB/DVD)	FIX	0	255	6	6
52	Contrast(RGB/DVD)	FIX	0	63	42	42
53	U Saturation(RGB/DVD)	FIX	0	63	44	44
54	V saturation(RGB/DVD)	FIX	0	63	43	43
55	V/FBL Delay	FIX	0	255	85	85
56	CrCb Delay	FIX	0	255	84	84
57	d/w h-position	FIX	0	255	255	255
58	d/w -blanking 1	FIX	0	255	255	255
59	d/w -blanking 2	FIX	0	255	255	255
60	PIP G CUTOFF	FIX	0	255	4	4
61	PIP G DRIVE	FIX	0	255	170	170
62	OSD/PIP BRIGHT BALANCE	FIX	0	31	31	31
63	PIP BRIGHT OFFSET	FIX	0	255	86	86
64	MDB_STRENGTH	FIX	0	127	68	68
65	MDB_HARMONIC	FIX	0	127	37	37
66	MDB_HP	FIX	0	30	9	9
67	MDB_LP	FIX	0	30	11	11
68	MDB_LIM	FIX	0	255	252	252
69	MDB_CUTOFF	FIX	0	40	12	12
70	EHT POSITION 1	FIX	0	255	5	5
71	EHT POSITION 2	FIX	0	255	249	249
72	3.4CH SLLTHD (TV-NO NOISE)	FIX	0	3	0	0
73	CH SLLTHD (TV-NO NOISE)	FIX	0	3	0	0
74	LNA Operating Point	FIX	0	255	166	166
75	SLLTHDV(TV NO NOISE)	FIX	0	6	0	0

No	Item	Remark	MIN	MAX	29" SLIM	29" SLIM
					CL-29Z30PQ	CL-29Z30MQ
76	LNA Default	FIX	0	1	0	0
77	LNA SWITCH	FIX	0	1	0	0
78	LMIXOFS	FIX	0	13	13	13
79	H-OUTDEL	FIX	0	255	72	72
80	CR-P Initial	FIX	0	255	4	4
81	CR-I Initial	FIX	0	255	5	5
82	DRX_CR_AMP_TH	FIX	0	255	10	10
83	Over Modulation Return Counter	FIX	0	255	100	100
84	VCR Mode Counter	FIX	0	255	5	5
85	"VID_AMP_HEAD_BS(In the modulation)"	FIX	0	255	40	40
86	CR_P (In the Over Modulation)	FIX	0	255	4	4
87	"THRSEL(picture shaking when weak signal)"	FIX	0	255	2	2
88	SLLTHDVP	FIX	0	255	1	1
89	EEP_BC_MIN_LIMIT	FIX	0	255	150	150

9. OPTION

No	Item	29" SLIM	29" SLIM
		CL-29Z30PQ	CL-29Z30MQ
1	System	CL	CL
2	ACS	Off	Off
3	AV Jack	2RCA+S+DVD	2RCA+S+DVD
4	Tilt	On	On
5	Vchip	Off	Off
6	Caption	On	On
7	PIP	Off	2-Tuner
8	LNA	Off	On
9	Auto On	Off	Off
10	StandBy LED	Off	Off
11	Philippines(AV MULTI)	Off	Off
12	Osd Language	English	English
13	FM Radio	Off	Off
14	Antenna Disp	Off	Off
15	Hi-Deviation	Off	Off
16	Plug & Play	On	On
17	DNIe Jr	Off	Off
18	Volume Curve	Small	Small
19	Color Matrix	Japan	Japan
20	PWM/Parabola	Parabola	Parabola

11. White Balance

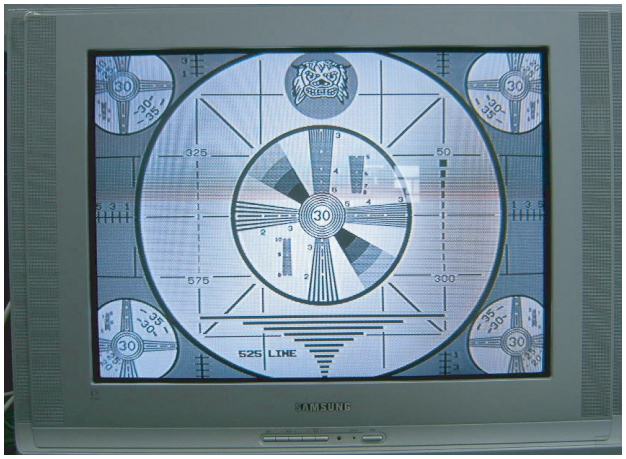
No	Item	Remark	29" SLIM	29" SLIM
			CL-29Z30PQ	CL-29Z30MQ
1	H	-	269± 3/274± 3/40± 0.3	269± 3/274± 3/40± 0.3
2	L	-	269± 3/274± 3/2.0± 0.2	269± 3/274± 3/2.0± 0.2

3-4 Service Adjustment

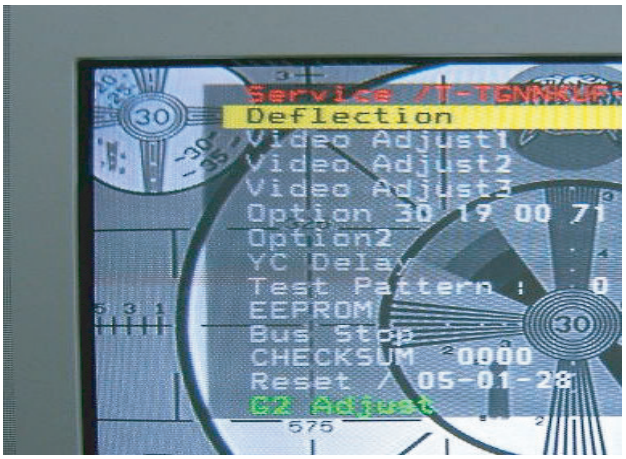
3-4-1 Adjusting the Picture Size

■ Since the KS7D chassis has the deflection settings data within the Factory Data, the picture size has to be adjusted when replacing Main Board, according to the following procedures.

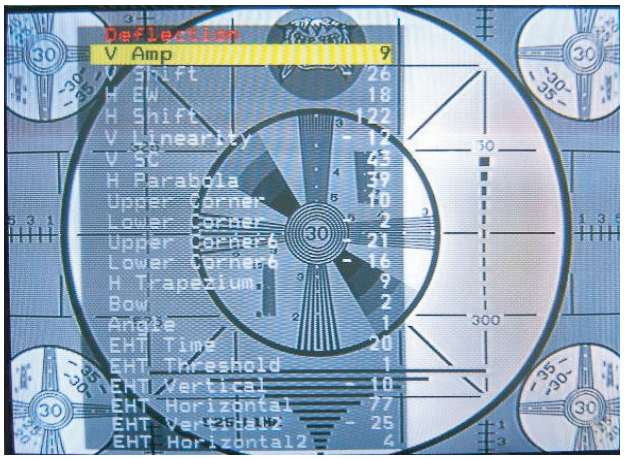
① Display the Lion pattern.



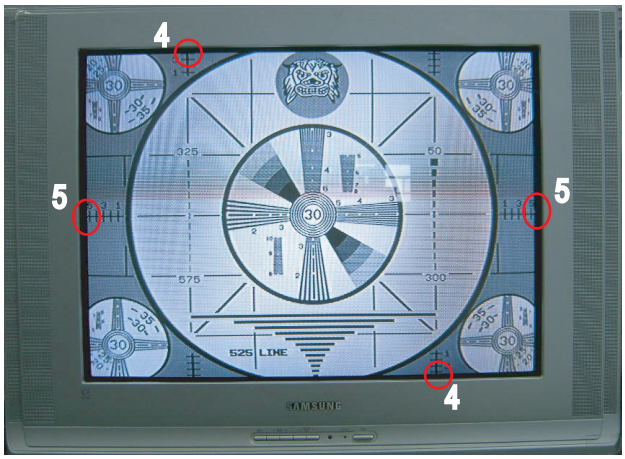
② Press "Power Off → Mute → 1 → 8 → 2 → Power On" using the remote control and enter Factory Mode.



③ Enter Deflection Mode.

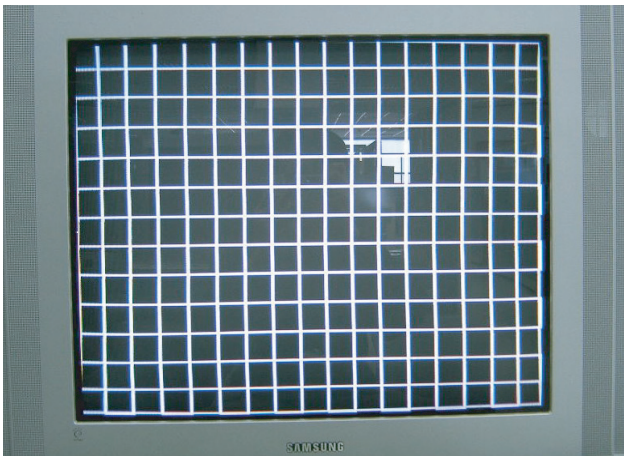


④ Adjust the V-AMP, V-SHIFT, H-AMP and H-SHIFT items so that the width becomes 5 and the height becomes 4.



3-4-2 Adjusting the Picture Straight Lines

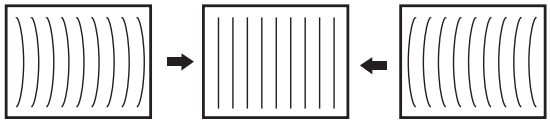
① Display the Cross Hatch pattern.



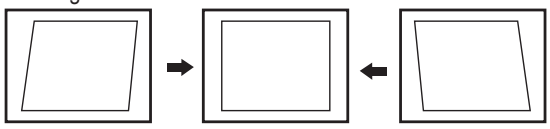
② Adjust settings other than V-AMP, V-SHIFT, H-AMP and H-SHIFT so that straight lines are displayed without curves.

③ Adjust BOW and the Angle settings so that the center line becomes a straight line.

10 BOW

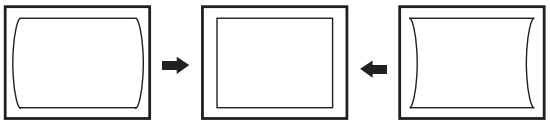


11 Angle

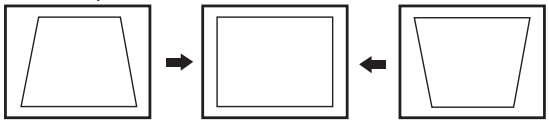


④ Adjust the H-Parabola and H-Trapezium settings so that the left and right lines become straight.

6 H-Parabola

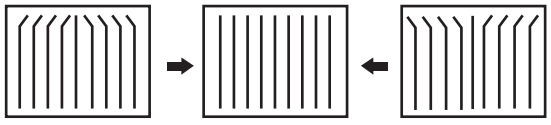


9 H-Trapezium

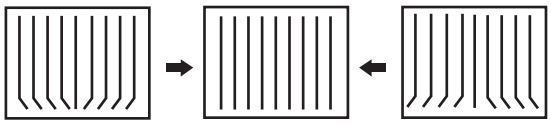


⑤ Adjust the Upper Corner and the Low Corner settings so that the end of the lines become straight.

7 Upper Coner

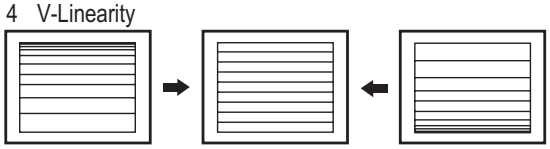


8 Low Coner

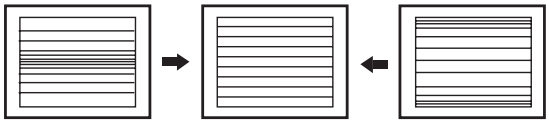


⑥ Adjust the V-Linearity and V-SC settings so that the intervals of the horizontal lines become uniform.

4 V-Linearity



5 V SC



⑦ When the adjustments are complete, display the Lion pattern and check that the picture size has not been changed. If there is no change, finish the adjustments.

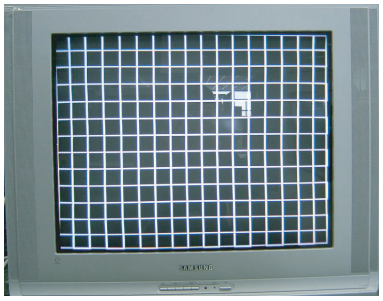
3-5 Replacements & Calibration

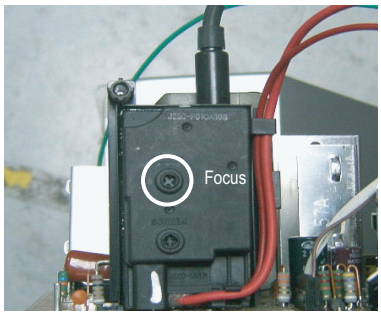
3-5-1 Adjusting the Focus

1. Display the Cross Hatch pattern.

2. Turn the Focus clockwise to the optimal position.

3. Slowly turn the Focus clockwise so that the cross line is the most clearly displayed.

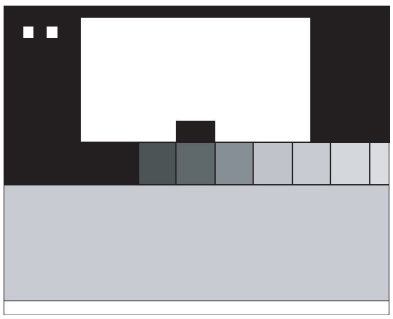


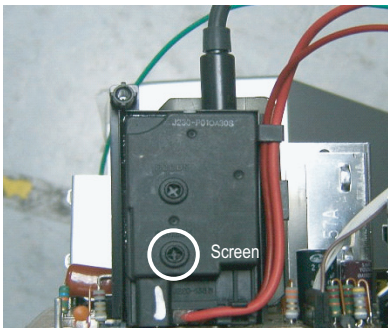


3-5-2 Adjusting the Screen Voltage

1. Select "Power Off → Mute → 1 → 8 → 2 → Power On" to enter Service Mode.

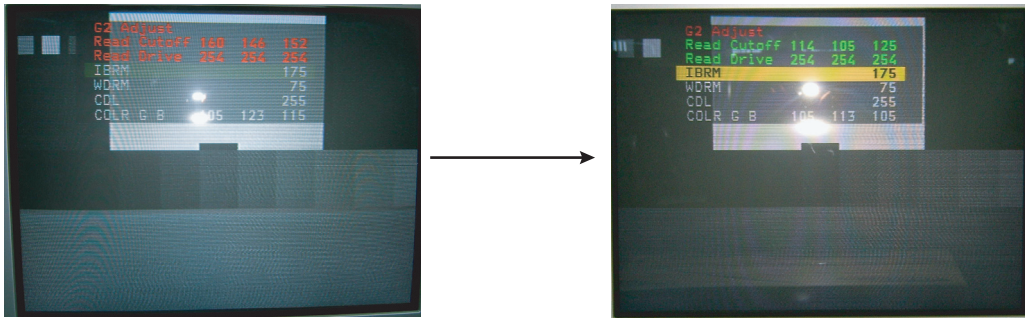
2. Display the Toshiba pattern.





3. Use remocon come into "G2 Adjust" mode by hand.

4. Turn Screen VR of FBT and confirm the characters below changed from RED to GREEN.

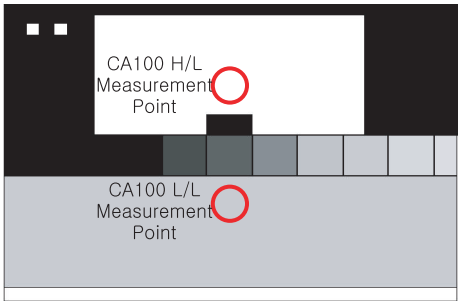


3-5-3 Adjusting the White Balance

1. Select "Power Off → Mute → 1 → 8 → 2 → Power On" to enter Service Mode.

2. Initialize all settings to the values appropriate to the corresponding model.

3. Display the Toshiba pattern and adjust the White Balance using CA100 with the coordinates of the corresponding model.



[CA100]

4. Enter Video Adjust1 of Service Mode. Adjust Low/Light.
   - Adjust Sub Bright to set Y.
   - Adjust B Cutoff to set y.
   - Adjust R Cutoff to set x.

5. Enter Video Adjust1 of Service Mode. Adjust High/Light.
   - Adjust Sub Contrast to set Y.
   - Adjust B Drive to set y.
   - Adjust R Drive to set x.

6. Check Low/Light and readjust it if its value has been changed.

7. If you have readjusted Low/Light, readjust High/Light until the two values are identical to the coordinates of the corresponding model.

※ White Balance Standard Data

No	Item	29" SLIM	29" SLIM	Required Adjustment
		CL-29Z30PQ	CL-29Z30MQ	
1	White Balance	269± 3/274± 3/40± 0.3 269± 3/274± 3/2.0± 0.2	269± 3/274± 3/40± 0.3 269± 3/274± 3/2.0± 0.2	White Balance (Standardization Applied)

3-5-4 Check List for the Screen Voltage and White Balance Adjustment

1. The Screen Voltage and White Balance are connected each other, and both of them have to be configured to the correct values.

2. Adjust the White Balance after the Screen Voltage was adjusted, and check if the Screen Voltage is normal after adjusting the White Balance.

3. If the White Balance is readjusted, check the Screen Voltage again.

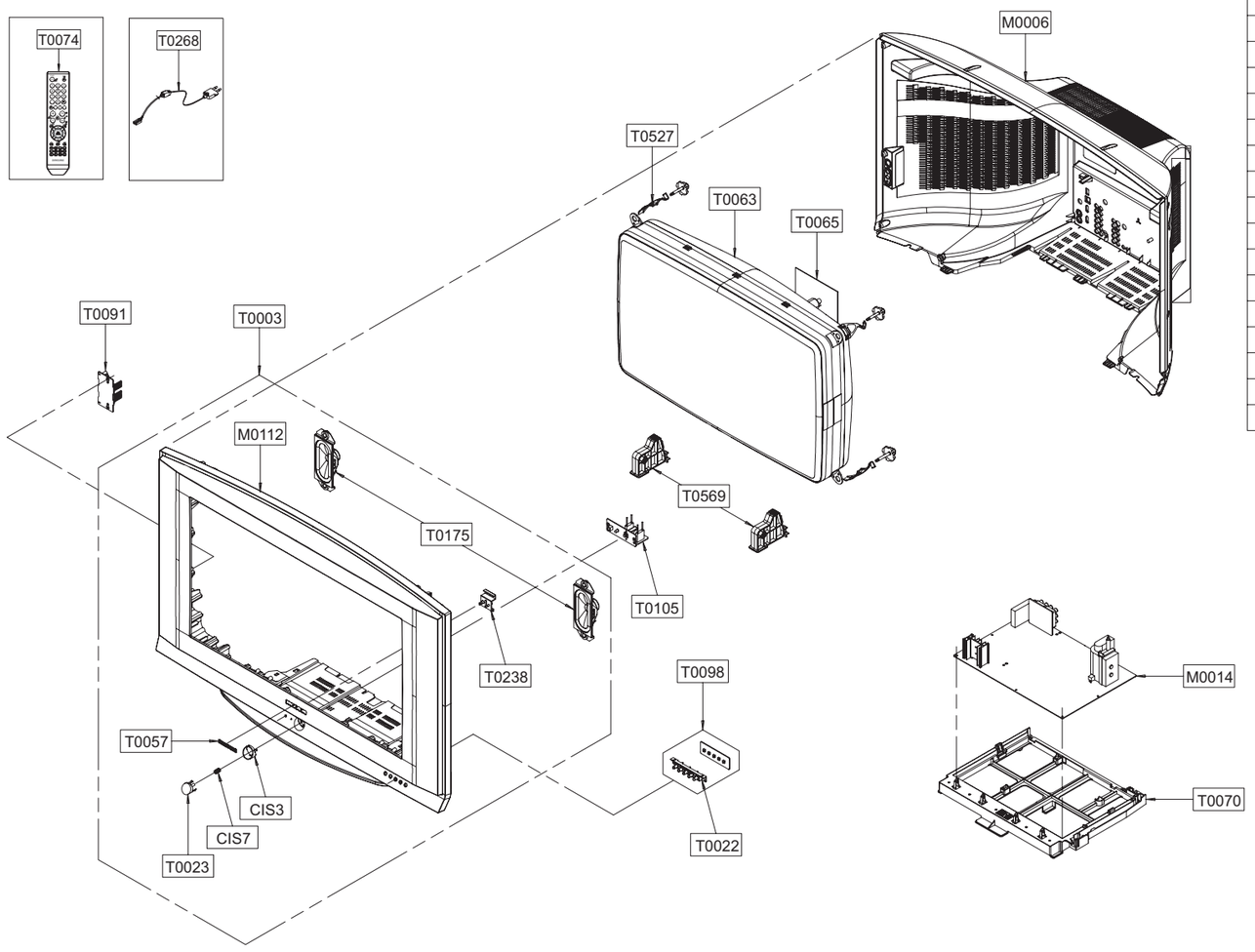
4. When the adjustment is finished, check the following checklist.
   - If there is a spot on the screen when turning the TV set off/on, adjust the Screen Voltage again.
   - If there is a ghost line on the screen, adjust the Screen Voltage again.

MEMO

4. Exploded View & Part List

4-1 CL29Z40MQTXXAO

You can search for the updated part code through ITSELF web site.
URL:http://itself.sec.samsung.co.kr



Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
CIS3	AA64-04333A	DECORATION-POWER	Z40,ABS,HB,GR515,AL	1	S.N.A	
CIS7	AA61-60003J	SPRING ETC-CS	-,SUS304,-,-,OD6,N7,OD6,-,	1	S.N.A	
M0006	AA63-01372B	COVER-REAR	29Z40(SAMEX),HIPS,HB,BK500,K6	1	S.A	
M0014	AA94-15816B	ASSY PCB MAIN	CL29Z30MQTXXAZ,KS7D,TIME C	1	S.A	
M0112	AA63-01365F	COVER-FRONT	29Z40,HIPS,HB,SEM,GR503,SV01	1	S.N.A	
T0003	AA96-04032F	ASSY COVER P-FRONT	29Z40,SEM,HIPS HB,GR5	1	S.A	
T0022	AA64-04326A	KNOB CONTROL	Z40,ABS,HB,GR515,SVM3012	1	S.A	
T0023	AA64-04328A	KNOB POWER	Z40,ABS,HB,GR515,SVM3012	1	S.N.A	
T0057	AA64-01062B	BADGE-BRAND	ALL,AL,T1.5,10.6,L65,BLK.SIL	1	S.N.A	
T0063	AA03-00486A	CRT COLOR	A68QFZ893X101,0,1.10,13.3,1.33	1	S.A	
T0065	AA94-15815B	ASSY PCB CRT	WITH OUT CRT PCB	1	S.A	
T0070	AA61-01424A	HOLDER-CHASSIS	32Z30,HIPS V0,T2.0,G4309,	1	S.N.A	
T0074	AA59-00385A	REMOCON	TIMECOP,TM85,39,INTERACE,NTSC,NO	1	S.A	
T0091	AA94-15813A	ASSY PCB MISC-A/V SIDE	,KS7D,TIME COP	1	S.A	
T0098	AA94-15114G	ASSY PCB MISC-CONTROL	CT-32Z40HD,K63A,NA	1	S.A	
T0105	AA94-15802A	ASSY PCB MISC-TACT S/W	K63A,NATURAL	1	S.N.A	
T0175	AA96-03164A	ASSY SPEAKER P	8ohm,6*13cm,Z31,10W,SPK+W	1	S.A	
T0238	AA64-04329A	WINDOW REMOCON-LED	Z40(HQ,SAMEX),PC,CLEA	1	S.N.A	
T0268	AA39-10006X	CBF-POWER CORD	-,-,KKP419C,3P,-,-,BLK,-,	1	S.A	
T0527	AA65-00061A	CLAMPER CORE-D,COIL	NYLON-66,VO,NTR	4	S.N.A	
T0569	AA61-00813D	SUPPORT-CRT	29Z30(SLIM),HIPS V0,T2.0,GR5	2	S.N.A	

5. Electrical Part List

5-1 CL29Z40MQTXXAO

You can search for the updated part code through ITSELF web site.
URL:http://itself.sec.samsung.co.kr

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
		ASSY CHASSIS				
M0017	AA91-09859C	ASSY CHASSIS	CL29Z40MQTXGSU,KS7D,TIME CO	1	S.N.A	
T0098	AA94-15114G	ASSY PCB MISC-CONTROL	CT-32Z40HD,K63A,NA	1	S.A	
DZY04	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
LY01	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
M0119	AA41-01199A	PCB CONTROL	CT-32Z30HDK,FR-1,1L,A,1.6T,2	1	S.N.A	
M2893	BH39-00419A	LEAD CONNECTOR	CT-32Z32HD,UL1007#26,UL/C	1	S.A	
RY02	2001-000577	R-CARBON	2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RY03	2001-000007	R-CARBON	3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RY04	2001-000878	R-CARBON	6.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RY05	2001-000009	R-CARBON	20KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
T0022	AA64-04326A	KNOB CONTROL	Z40,ABS,HB,GR515,SVM3012	1	S.A	
T0057	AA97-15792E	ASSY AUTO-CONTROL	CT-32Z40HD,K63A,NATURA	1	S.N.A	
T0245	0202-001522	SOLDER-WIRE FLUX	LFA3-107,-,D1.2,96.5Sn/	0.001	S.N.A	
T0313	3404-000243	SWITCH-TACT	15V,20mA,160gf,6x3.4mm,SPST	1	S.A	
T0313	3404-000243	SWITCH-TACT	15V,20mA,160gf,6x3.4mm,SPST	1	S.A	
T0313	3404-000243	SWITCH-TACT	15V,20mA,160gf,6x3.4mm,SPST	1	S.A	
T0313	3404-000243	SWITCH-TACT	15V,20mA,160gf,6x3.4mm,SPST	1	S.A	
T0313	3404-000243	SWITCH-TACT	15V,20mA,160gf,6x3.4mm,SPST	1	S.A	
T0105	AA94-15802A	ASSY PCB MISC-TACT S/W	K63A,NATURAL	1	S.N.A	
CC01	2401-002291	C-AL	47uF,20%,16V,GP,TP,6.3x5,5	1	S.A	
CN330	3711-001031	HEADER-BOARD TO CABLE	BOX,6P,1R,2.5MM,AN	1	S.A	
DC01	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
DC02	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
DZC01	0403-000508	DIODE-ZENER	MTZJ5.6B,5.45-5.73V,500mW,DO	1	S.A	
L0405	0601-000262	LED	ROUND,RED,5mm,700nm	1	S.A	
M2893	BP39-00033C	LEAD CONNECTOR	K62A(CORE),UL1007#26,UL/C	1	S.A	
PCB	AA41-01198A	PCB SUB-TACT S/W	CT-32Z40HDK,FR-1,1L,A,1	1	S.N.A	
RC01	2001-000020	R-CARBON(S)	22OHM,5%,1/2W,AA,TP,2.4X6.4M	1	S.A	
RC02	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RM01	0609-001202	Module Remocon	HORIZONTAL,12.4mm,TR	1	S.A	
T0245	0202-001522	SOLDER-WIRE FLUX	LFA3-107,-,D1.2,96.5Sn/	0.001	S.N.A	
T0313	3404-000243	SWITCH-TACT	15V,20mA,160gf,6x3.4mm,SPST	1	S.A	
	AA97-16522A	ASSY AUTO-TACT S/W	TXS3082WHX/XAA,K63A,N	1	S.N.A	
T0091	AA94-15813A	ASSY PCB MISC-A/V SIDE	,KS7D,TIME COP	1	S.A	
C701	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C702	2202-000121	C-CERAMIC,MLC-AXIAL	0.1nF,10%,50V,Y5P,-,	1	S.A	
C703	2202-000121	C-CERAMIC,MLC-AXIAL	0.1nF,10%,50V,Y5P,-,	1	S.A	
C704	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
DZ701	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
DZ702	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
JA332	3722-000544	JACK-VHS	4P,AG,BLK,STRAIGHT	1	S.A	
JA333	3722-001164	JACK-PIN	3P,SN,WH:YE:RE,STRAIGHT	1	S.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,,50	1	S.N.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,,50	1	S.N.A	
L701	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
L702	2701-000168	INDUCTOR-AXIAL	3.3UH,5%,2534	1	S.A	
L703	2701-000168	INDUCTOR-AXIAL	3.3UH,5%,2534	1	S.A	
L704	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
M2893	AA39-20068J	LEAD CONNECTOR	,8P,600MM,YBNH250-08,6709	1	S.A	
PCB	AA41-01212A	PCB SUB-SIDE A/V	KS7D,FR-1,-,00,1.6,245*	1	S.N.A	
R701	2001-000969	R-CARBON	75OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R702	2001-000969	R-CARBON	75OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R703	2001-000969	R-CARBON	75OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
T0245	0202-001522	SOLDER-WIRE FLUX	LFA3-107,-,D1.2,96.5Sn/	0.003	S.N.A	
T0245	AA39-20070B	LEAD CONNECTOR-ASSY	,7P,600,YBNH025-07,6	1	S.A	
T0569	AA97-16525A	ASSY AUTO-A/V SIDE	,KS7D,TIME COP	1	S.N.A	
T0065	AA94-15815B	ASSY PCB CRT	WITH OUT CRT PCB	1	S.A	
C504	2301-001259	C-FILM,LEAD-PPF	100nF,5%,400V,TP,19x8x16	1	S.A	
C506	2401-000430	C-AL	10uF,20%,250V,GP,TP,10x16mm,5m	1	S.A	
C507	2401-000430	C-AL	10uF,20%,250V,GP,TP,10x16mm,5m	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C508	2201-000723	C-CERAMIC,DISC	4.7NF,20%,3KV,Y5U,TP,16X5	1	S.A	
C509	2201-002147	C-CERAMIC,DISC	2.7NF,10%,500V,Y5P,TP,10X	1	S.A	
C510	2201-002147	C-CERAMIC,DISC	2.7NF,10%,500V,Y5P,TP,10X	1	S.A	
CN330	3711-003241	HEADER-BOARD TO CABLE	BOX,14P,1R,2.5MM,S	1	S.A	
D501	0401-000006	DIODE-SWITCHING	BAV21,250V,200mA,DO-35,T	1	S.A	
D502	0401-000006	DIODE-SWITCHING	BAV21,250V,200mA,DO-35,T	1	S.A	
D503	0401-000006	DIODE-SWITCHING	BAV21,250V,200mA,DO-35,T	1	S.A	
D504	0402-000546	DIODE-RECTIFIER	TVR10G,400V,1A,DO-41,TP	1	S.A	
DZ501	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
DZ502	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
DZ503	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
EL501	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL502	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
F101	2901-000299	FILTER-EMI ON BOARD	-,6A,UL/CSA,-,9x7.5,	1	S.A	
GT501	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT502	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT503	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT504	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
IC501	AA96-50311N	ASSY HEAT SINK P	AA62-30175D,TDA6109JF,S	1	S.N.A	
L503A	2702-001092	INDUCTOR-RADIAL	2.2uH,10%,4x6mm	1	S.A	
M0081	6003-000334	SCREW-TAPTITE	RH,+,2S,M3,L6,ZPC(YEL),SWR	1	S.N.A	
M2893	AA39-00376B	LEAD CONNECTOR	ET-PAL CIS,UL1007/1185#26	1	S.A	
PCB	AA41-01187A	PCB CRT	CS29M20,FR-1,9L,00,1.6T,245*245,	1	S.N.A	
Q503	0501-000283	TR-SMALL SIGNAL	KSA539,PNP,400mW,TO-92,T	1	S.A	
R501	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R501H	2002-001008	R-COMPOSITION	1.8Kohm,10%,1/2W,AA,TP,3.7	1	S.A	
R502H	2002-001008	R-COMPOSITION	1.8Kohm,10%,1/2W,AA,TP,3.7	1	S.A	
R504	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R505	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R511	2002-001008	R-COMPOSITION	1.8Kohm,10%,1/2W,AA,TP,3.7	1	S.A	
R514	2001-001062	R-CARBON(S)	10MOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R550	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R551	2001-000761	R-CARBON	430OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R553	2001-000411	R-CARBON	18KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
T0074	1201-002114	IC-VIDEO AMP	TDA6109JF,SDIP,9P,18.5mm,-	1	S.A	
T0100	AA97-16527B	ASSY AUTO-CRT		1	S.N.A	
T0175	AA62-30175D	HEAT SINK-PS	-,SECC,T1.0,-,33X15X30 FT-2	1	S.N.A	
T0245	AA39-20010D	LEAD CONNECTOR-ASSY	,1P,400,YFH800-01,S,	1	S.A	
T0245	0202-001522	SOLDER-WIRE FLUX	LFA3-107,-,D1.2,96.5Sn/	0.003	S.N.A	
T0310	4715-000001	SURGE ABSORBER	1000V,+50-10%,-,-,-	1	S.A	
T0310	4715-000001	SURGE ABSORBER	1000V,+50-10%,-,-,-	1	S.A	
T0310	4715-000001	SURGE ABSORBER	1000V,+50-10%,-,-,-	1	S.A	
T0310	4715-000001	SURGE ABSORBER	1000V,+50-10%,-,-,-	1	S.A	
⚠ V999S	3704-001197	SOCKET-CRT	8P+SEN,29PI,22.5PI,NI+SN,-	1	S.A	
M0014	AA94-15816B	ASSY PCB MAIN	CL29Z30MQTXXAZ,KS7D,TIME C	1	S.A	
C107	2202-002037	C-CERAMIC,MLC-AXIAL	100nF,80-20%,50V,Y5V	1	S.A	
C108	2401-003578	C-AL	1000uF,20%,10V,GP,TP,8x20mm,5	1	S.A	
C112	2202-002037	C-CERAMIC,MLC-AXIAL	100nF,80-20%,50V,Y5V	1	S.A	
C212	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
C299	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
C301	2301-000342	C-FILM,LEAD-PEF	2.2nF,5%,50V,TP,7.4x3.9x	1	S.A	
C302	2201-000192	C-CERAMIC,DISC	0.01nF,0.25pF,500V,C0G,-,	1	S.A	
C303	2401-000360	C-AL	100uF,20%,50V,GP,TP,8x11.5,5	1	S.A	
C304	2401-000365	C-AL	100uF,20%,50V,WT,TP,10x12.5mm,	1	S.A	
C305	2305-000285	C-FILM,LEAD-PEF	220NF,5%,100V,TP,10.5X5.	1	S.A	
C306	2301-000148	C-FILM,LEAD-PEF	10nF,5%,100V,TP,7x3.2x7m	1	S.A	
C307	2401-000050	C-AL	10uF,20%,16V,GP,TP,5x11,2.5	1	S.A	
C308	2305-000411	C-FILM,LEAD-PEF	470nF,5%,50V,TP,7.3x4.8x	1	S.A	
C400	2305-001037	C-FILM,LEAD-PEF	330nF,5%,63V,TP,7.5x5.5x	1	S.A	
C401	2301-000383	C-FILM,LEAD-PEF	10nF,5%,50V,TP,6x7x3.2mm	1	S.A	
C402	2401-000302	C-AL	100uF,20%,25V,GP,TP,6.3x11,5	1	S.A	
C403	2201-000599	C-CERAMIC,DISC	0.56NF,10%,500V,Y5P,TP,5.	1	S.A	
C404	2305-000382	C-FILM,LEAD-PEF	4.7nF,5%,400V,TP,-,5mm	1	S.A	
C405	2301-001338	C-FILM,LEAD-OTHER	0.68NF,5%,1.6KV,BK,28X	1	S.A	
C406	2301-001271	C-FILM,LEAD-PPF	510nF,5%,400V,BK,26x13.5	1	S.A	
C406A	2301-001420	C-FILM,LEAD-PPF	1200nF,5%,400V,BK,31x16.	1	S.A	
C407	2401-002268	C-AL	2.2uF,20%,250V,LZ,TP,8X11,5	1	S.A	
C408	2201-000556	C-CERAMIC,DISC	0.47NF,10%,500V,Y5P,TP,5.	1	S.A	
C409	2401-001397	C-AL	470uF,20%,25V,GP,TP,10x16,5	1	S.A	
C410	2401-002288	C-AL	470uF,20%,25V,WT,TP,10x20,5	1	S.A	
C411	2201-000556	C-CERAMIC,DISC	0.47NF,10%,500V,Y5P,TP,5.	1	S.A	
C412	2401-001527	C-AL	47uF,20%,250V,HR,TP,13x25mm,5m	1	S.A	
C413	2201-000556	C-CERAMIC,DISC	0.47NF,10%,500V,Y5P,TP,5.	1	S.A	
C414	2305-000237	C-FILM,LEAD-PEF	1uF,5%,63V,TP,7.5x15.5mm	1	S.A	
C415	2301-001259	C-FILM,LEAD-PPF	100nF,5%,400V,TP,19x8x16	1	S.A	
C416	2305-000237	C-FILM,LEAD-PEF	1uF,5%,63V,TP,7.5x15.5mm	1	S.A	

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C420	2306-000122	C-FILM,LEAD-PPF	100nF,5%,50V,TP,7.3x4.0x	1	S.A	
C421	2301-000383	C-FILM,LEAD-PEF	10nF,5%,50V,TP,6x7x3.2mm	1	S.A	
C424	2201-000132	C-CERAMIC,DISC	0.1NF,10%,500V,Y5P,TP,6.5	1	S.A	
C607	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C608	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C610	2301-000175	C-FILM,LEAD-PEF	15nF,5%,50V,TP,7.1x3.5x1	1	S.A	
C611	2301-000175	C-FILM,LEAD-PEF	15nF,5%,50V,TP,7.1x3.5x1	1	S.A	
C612	2401-001914	C-AL	1uF,20%,50V,BP,TP,5x11,5	1	S.A	
C613	2401-001914	C-AL	1uF,20%,50V,BP,TP,5x11,5	1	S.A	
C617	2401-000493	C-AL	10uF,20%,50V,LZ,TP,5x11mm,5mm	1	S.A	
C620	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
C621	2401-001998	C-AL	1000uF,20%,25V,GP,TP,10x20,5mm	1	S.A	
C627	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C629	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C638	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C642	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C644	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C800	2401-000603	C-AL	1UF,20%,50V,GP,TP,5X11,2	1	S.A	
C803	2401-003025	C-AL	330uF,20%,400V,GP,BK,30x40,10	1	S.A	
C806	2306-000112	C-FILM,LEAD-PPF	100nF,20%,250V,BK,-,15mm	1	S.A	
C807	2301-001158	C-FILM,LEAD-PPF	1nF,5%,800V,TP,15x12x5.5	1	S.A	
C808	2401-001585	C-AL	47uF,20%,50V,WT,TP,8x11.5,5	1	S.A	
C809	2201-000863	C-CERAMIC,DISC	0.68NF,10%,50V,Y5P,TP,5X3	1	S.A	
C812	2401-002075	C-AL	4.7uF,20%,50V,GP,TP,5x11,5	1	S.A	
C814	2401-002144	C-AL	47uF,20%,16V,GP,TP,5x11,5	1	S.A	
C815	2401-002463	C-AL	470uF,20%,16V,GP,TP,8x11.5,5	1	S.A	
C817	2401-000703	C-AL	2200uF,20%,25V,GP,-,12.5x25mm,	1	S.A	
C818	2201-000556	C-CERAMIC,DISC	0.47NF,10%,500V,Y5P,TP,5.	1	S.A	
C819	2401-003141	C-AL	2200uF,20%,25V,WT,TP,13x25,5mm	1	S.A	
C820	2201-000406	C-CERAMIC,DISC	0.27NF,10%,2KV,Y5P,TP,6.3	1	S.A	
C821	2401-000262	C-AL	100uF,20%,160V,HR,TP,16x25,7.5	1	S.A	
C822	2401-000262	C-AL	100uF,20%,160V,HR,TP,16x25,7.5	1	S.A	
C823	2201-000291	C-CERAMIC,DISC	1NF,10%,500V,Y5P,TP,7.5X3	1	S.A	
C824	2305-000289	C-FILM,LEAD-PEF	220nF,5%,63V,TP,-,5mm	1	S.A	
C826	2401-000560	C-AL	1uF,20%,160V,GP,TP,6.3x11,5	1	S.A	
C828	2201-000374	C-CERAMIC,DISC	0.22NF,5%,50V,C0G,TP,10.5	1	S.A	
C843	2301-000192	C-FILM,LEAD-PEF	1nF,5%,50V,TP,5.3x10mm,5	1	S.A	
C844	2301-000356	C-FILM,LEAD-PEF	47nF,5%,50V,TP,7.5x4.0x6	1	S.A	
C845	2201-000599	C-CERAMIC,DISC	0.56NF,10%,500V,Y5P,TP,5.	1	S.A	
C846	2401-000703	C-AL	2200uF,20%,25V,GP,-,12.5x25mm,	1	S.A	
C850	2305-001037	C-FILM,LEAD-PEF	330nF,5%,63V,TP,7.5x5.5x	1	S.A	
C888	2201-000556	C-CERAMIC,DISC	0.47NF,10%,500V,Y5P,TP,5.	1	S.A	
CIS1	0205-001154	OIL-SILICON	G746,-,-	0.1	S.N.A	
CIS1	0205-001154	OIL-SILICON	G746,-,-	0.1	S.N.A	
CIS1	0205-001154	OIL-SILICON	G746,-,-	0.2	S.N.A	
CIS1	0205-001154	OIL-SILICON	G746,-,-	0.1	S.N.A	
CIS1	0205-001154	OIL-SILICON	G746,-,-	0.2	S.N.A	
CIS1	0205-001154	OIL-SILICON	G746,-,-	0.2	S.N.A	
CIS1	0205-001154	OIL-SILICON	G746,-,-	0.2	S.N.A	
CIS3	AA40-00016A	TUNER-F/S	TDQ-6F/13F2S,NTSC,181CH,45.75M	1	S.A	
CN330	3711-001038	HEADER-BOARD TO CABLE	BOX,6P,1R,2.5mm,ST	1	S.A	
CN330	3711-001084	HEADER-BOARD TO CABLE	BOX,8P,1R,2.5MM,ST	1	S.A	
CN330	3711-003043	HEADER-BOARD TO CABLE	BOX,4P,1R,2.5MM,ST	1	S.A	
CN330	3711-004379	HEADER-BOARD TO CABLE	BOX,4P,1R,2mm,STRA	1	S.A	
CN330	3711-002643	HEADER-BOARD TO CABLE	BOX,4P,1R,2.5mm,ST	1	S.A	
CN330	3711-002645	HEADER-BOARD TO CABLE	BOX,6P,1R,2.5mm,ST	1	S.A	
CN330	3711-002646	HEADER-BOARD TO CABLE	BOX,7P,1R,2.5mm,ST	1	S.A	
CN330	3711-002647	HEADER-BOARD TO CABLE	BOX,8P,1R,2.5mm,ST	1	S.A	
CN909	AA37-00001A	CONNECTOR-FBT FIX PIN	JM-3500,CPTTV,0.36	1	S.A	
⚠ CR402S	2306-000330	C-FILM,LEAD-PPF	7.7NF,3%,1.6KV,BK,28.5X1	1	S.A	
⚠ CR403S	2306-000327	C-FILM,LEAD-PPF	6.3nF,3%,1.6KV,TP,28.5x1	1	S.A	
⚠ CR404S	2301-001065	C-FILM,LEAD-PPF	47nF,5%,630V,TP,19x15.5x	1	S.A	
⚠ CR406S	2301-001091	C-FILM,LEAD-PPF	470nF,5%,400V,BK,26x21.5	1	S.A	
CT501	2401-000832	C-AL	220uF,20%,25V,GP,TP,8x11.5,5	1	S.A	
CT502	2401-000832	C-AL	220uF,20%,25V,GP,TP,8x11.5,5	1	S.A	
CT503	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
CV101	2306-000122	C-FILM,LEAD-PPF	100nF,5%,50V,TP,7.3x4.0x	1	S.A	
CV102	2401-002463	C-AL	470uF,20%,16V,GP,TP,8x11.5,5	1	S.A	
CV103	2202-002037	C-CERAMIC,MLC-AXIAL	100nF,80-20%,50V,Y5V	1	S.A	
CV104	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
CV110	2301-000383	C-FILM,LEAD-PEF	10nF,5%,50V,TP,6x7x3.2mm	1	S.A	
CV111A	2202-002253	C-CERAMIC,MLC-AXIAL	100.0nF,+80-20%,50.0	1	S.A	
CV198	2202-000216	C-CERAMIC,MLC-AXIAL	0.027NF,5%,50V,SL,TP	1	S.A	
CV199	2202-000216	C-CERAMIC,MLC-AXIAL	0.027NF,5%,50V,SL,TP	1	S.A	
CV201	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
CV202	2401-002619	C-AL	47uF,20%,25V,GP,TP,5x11,5	1	S.A	
CV203	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
CV204	2401-002619	C-AL	47uF,20%,25V,GP,TP,5x11,5	1	S.A	
CV205	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
CV206	2401-002619	C-AL	47uF,20%,25V,GP,TP,5x11,5	1	S.A	
CV207	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
CV208	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
CV209	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
CV212	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
CV213	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
CV214	2401-002075	C-AL	4.7uF,20%,50V,GP,TP,5x11,5	1	S.A	
CV218	2401-002619	C-AL	47uF,20%,25V,GP,TP,5x11,5	1	S.A	
CV219	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
CV222	2401-000603	C-AL	1UF,20%,50V,GP,TP,5X11,2	1	S.A	
CV223A	2301-001211	C-FILM,LEAD-PPF	22nF,5%,400V,TP,20x7x14m	1	S.A	
CV231	2401-002619	C-AL	47uF,20%,25V,GP,TP,5x11,5	1	S.A	
CV250	2202-000632	C-CERAMIC,MLC-AXIAL	100nF,20%,50V,Z5U,TP	1	S.A	
CV251	2202-000632	C-CERAMIC,MLC-AXIAL	100nF,20%,50V,Z5U,TP	1	S.A	
CV252	2202-000632	C-CERAMIC,MLC-AXIAL	100nF,20%,50V,Z5U,TP	1	S.A	
CV253	2201-000389	C-CERAMIC,DISC	0.022NF,5%,50V,C0G,TP,5X3	1	S.A	
CV254	2201-000389	C-CERAMIC,DISC	0.022NF,5%,50V,C0G,TP,5X3	1	S.A	
CV255	2401-002619	C-AL	47uF,20%,25V,GP,TP,5x11,5	1	S.A	
CV256	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
CV257	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
CV258	2401-002619	C-AL	47uF,20%,25V,GP,TP,5x11,5	1	S.A	
CV259	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
CV260	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
CV261	2401-002619	C-AL	47uF,20%,25V,GP,TP,5x11,5	1	S.A	
CV262B	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
CV271	2202-000243	C-CERAMIC,MLC-AXIAL	33pF,5%,50V,SL,TP,3.	1	S.A	
CV272	2401-000025	C-AL	100uF,20%,16V,GP,TP,6.3x11,5	1	S.A	
CV601	2202-002037	C-CERAMIC,MLC-AXIAL	100nF,80-20%,50V,Y5V	1	S.A	
CV602	2401-001026	C-AL	3.3UF,20%,50V,GP,TP,5X11,5	1	S.A	
CV603	2401-001989	C-AL	4.7uF,20%,50V,BP,TP,5x11,5	1	S.A	
CV604	2401-001989	C-AL	4.7uF,20%,50V,BP,TP,5x11,5	1	S.A	
CV605	2401-001989	C-AL	4.7uF,20%,50V,BP,TP,5x11,5	1	S.A	
CV606	2401-001989	C-AL	4.7uF,20%,50V,BP,TP,5x11,5	1	S.A	
CV607	2401-001989	C-AL	4.7uF,20%,50V,BP,TP,5x11,5	1	S.A	
CV608	2401-001989	C-AL	4.7uF,20%,50V,BP,TP,5x11,5	1	S.A	
CV611	2401-002619	C-AL	47uF,20%,25V,GP,TP,5x11,5	1	S.A	
CV612	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
CV643	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
CV701	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
CV702	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
CV703	2202-000243	C-CERAMIC,MLC-AXIAL	33pF,5%,50V,SL,TP,3.	1	S.A	
CV704	2202-000243	C-CERAMIC,MLC-AXIAL	33pF,5%,50V,SL,TP,3.	1	S.A	
CV705	2202-000243	C-CERAMIC,MLC-AXIAL	33pF,5%,50V,SL,TP,3.	1	S.A	
CV901	2401-002144	C-AL	47uF,20%,16V,GP,TP,5x11,5	1	S.A	
CV902	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
CV903	2401-002075	C-AL	4.7uF,20%,50V,GP,TP,5x11,5	1	S.A	
CV904	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
CV905	2401-002619	C-AL	47uF,20%,25V,GP,TP,5x11,5	1	S.A	
CV907	2401-002619	C-AL	47uF,20%,25V,GP,TP,5x11,5	1	S.A	
CV908	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
CV909	2401-002619	C-AL	47uF,20%,25V,GP,TP,5x11,5	1	S.A	
CV910	2305-000412	C-FILM,LEAD-PEF	470nF,5%,63V,TP,-,5mm	1	S.A	
CV911	2305-000412	C-FILM,LEAD-PEF	470nF,5%,63V,TP,-,5mm	1	S.A	
CV912	2202-002037	C-CERAMIC,MLC-AXIAL	100nF,80-20%,50V,Y5V	1	S.A	
CV913	2202-000121	C-CERAMIC,MLC-AXIAL	0.1nF,10%,50V,Y5P,-,	1	S.A	
CV914	2202-002037	C-CERAMIC,MLC-AXIAL	100nF,80-20%,50V,Y5V	1	S.A	
CV915	2202-000121	C-CERAMIC,MLC-AXIAL	0.1nF,10%,50V,Y5P,-,	1	S.A	
CV918	2401-003578	C-AL	1000uF,20%,10V,GP,TP,8x20mm,5	1	S.A	
CV920	2202-000863	C-CERAMIC,MLC-AXIAL	560pF,10%,50V,Y5P,TP	1	S.A	
CV933	2305-000411	C-FILM,LEAD-PEF	470nF,5%,50V,TP,7.3x4.8x	1	S.A	
CV934	2305-000411	C-FILM,LEAD-PEF	470nF,5%,50V,TP,7.3x4.8x	1	S.A	
CV935	2305-000411	C-FILM,LEAD-PEF	470nF,5%,50V,TP,7.3x4.8x	1	S.A	
⚠ CX801S	2306-000321	C-FILM,LEAD-PPF	470NF,20%,275V,BK,31X11X	1	S.A	
⚠ CY801S	2201-000963	C-CERAMIC,DISC	1NF,20%,400V,Y5U,TP,9.5X6	1	S.A	
⚠ CY802S	2201-000987	C-CERAMIC,DISC	2.2NF,20%,400V,Y5U,BK,12.	1	S.A	
D303	0402-000546	DIODE-RECTIFIER	TVR10G,400V,1A,DO-41,TP	1	S.A	
D401	0402-000537	DIODE-RECTIFIER	RH1A,600V,0.6A,DO-204AC,	1	S.A	
D402	0402-000132	DIODE-RECTIFIER	1N4004,400V,1A,DO-41,TP	1	S.A	
D403	0402-000132	DIODE-RECTIFIER	1N4004,400V,1A,DO-41,TP	1	S.A	
D404	0402-001599	DIODE-RECTIFIER	DGP30L,1500,3A,DO-201AD(	1	S.A	
D405	0402-000534	DIODE-RECTIFIER	RG10V,400V,1.2A,DO-201,T	1	S.A	
D406	0402-000540	DIODE-RECTIFIER	RU20A,600V,1.5A,-,TP	1	S.A	
D407	0402-000540	DIODE-RECTIFIER	RU20A,600V,1.5A,-,TP	1	S.A	
D408	0402-001295	DIODE-RECTIFIER	GUR460L-5700,600V,4A,DO-	1	S.A	
D409	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
D499	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
⚠ D800S	0402-000116	DIODE-BRIDGE	RBV606,600V,6A,SIP-4,ST	1	S.A	
D803	0402-000546	DIODE-RECTIFIER	TVR10G,400V,1A,DO-41,TP	1	S.A	
D804	0401-000006	DIODE-SWITCHING	BAV21,250V,200mA,DO-35,T	1	S.A	
D805	0401-000006	DIODE-SWITCHING	BAV21,250V,200mA,DO-35,T	1	S.A	
D806	0402-000546	DIODE-RECTIFIER	TVR10G,400V,1A,DO-41,TP	1	S.A	
D807	0402-001604	DIODE-RECTIFIER	MUR420,200V,4A,DO-201AD,	1	S.A	
D808	0402-000132	DIODE-RECTIFIER	1N4004,400V,1A,DO-41,TP	1	S.A	
D809A	0402-001604	DIODE-RECTIFIER	MUR420,200V,4A,DO-201AD,	1	S.A	
D811	0402-001603	DIODE-RECTIFIER	MUR480E,800V,4A,DO-201AD	1	S.A	
D812	0404-001056	DIODE-SCHOTTKY	RK16,60V,1500MA,DO-204AC,	1	S.A	
D813	0402-000493	DIODE-RECTIFIER	1R5GU41,400V,1.5A,DO-15L	1	S.A	
D814	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
D818	0403-000714	DIODE-ZENER	MTZJ3.3B,3.32-3.53V,500mW,DO	1	S.A	
D819	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
D823	0402-000132	DIODE-RECTIFIER	1N4004,400V,1A,DO-41,TP	1	S.A	
D824	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
D825	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
D901	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
DU410	1201-000010	IC-OP AMP	2030,PENTAWATT,5P,-,SINGLE,-,C	1	S.A	
DV201	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
DV202	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
DV203	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
DV901	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
DV951	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
DV952	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
DZ201	0403-000508	DIODE-ZENER	MTZJ5.6B,5.45-5.73V,500mW,DO	1	S.A	
DZ242	0403-000510	DIODE-ZENER	MTZJ6.2B,5.96-6.27V,500mW,DO	1	S.A	
DZ299	0403-000508	DIODE-ZENER	MTZJ5.6B,5.45-5.73V,500mW,DO	1	S.A	
DZ301	0403-001329	DIODE-ZENER	MTZJ24B,22.75-23.73V,500mW,D	1	S.A	
DZ302	0403-001329	DIODE-ZENER	MTZJ24B,22.75-23.73V,500mW,D	1	S.A	
DZ303	0403-001221	DIODE-ZENER	UZ39BSB,35.36-37.19V,500mW,D	1	S.A	
DZ306	0403-000700	DIODE-ZENER	TZP33A,5%,1000mW,DO-41,TP	1	S.A	
DZ603	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
DZ701	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
DZ702	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
DZ703	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
DZ704	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
DZ802	0403-000509	DIODE-ZENER	MTZJ5.6B,5.4-5.7V,500mW,DO-3	1	S.A	
DZ807	0403-000718	DIODE-ZENER	MTZJ6.8B,6.52-6.79V,500mW,DO	1	S.A	
DZ810	0403-000509	DIODE-ZENER	MTZJ5.6B,5.4-5.7V,500mW,DO-3	1	S.A	
DZ811	0403-000700	DIODE-ZENER	TZP33A,5%,1000mW,DO-41,TP	1	S.A	
DZ812	0403-000700	DIODE-ZENER	TZP33A,5%,1000mW,DO-41,TP	1	S.A	
DZ813	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
DZ814	0403-001320	DIODE-ZENER	MTZJ6.2C,6.16-6.4V,500mW,DO-	1	S.A	
DZ815	0403-001321	DIODE-ZENER	MTZJ6.8C,6.7-6.97V,500mW,DO-	1	S.A	
DZ816	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
DZ820	0403-001373	DIODE-ZENER	MTZJ5.1A,4.85-5.03V,500mW,DO	1	S.A	
DZ821	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
DZ905	0403-001317	DIODE-ZENER	MTZJ3.0B,3.01-3.22V,500mW,DO	1	S.A	
DZV101	0403-000508	DIODE-ZENER	MTZJ5.6B,5.45-5.73V,500mW,DO	1	S.A	
DZV200	0403-000508	DIODE-ZENER	MTZJ5.6B,5.45-5.73V,500mW,DO	1	S.A	
DZV201	0403-000714	DIODE-ZENER	MTZJ3.3B,3.32-3.53V,500mW,DO	1	S.A	
DZV203	0403-001320	DIODE-ZENER	MTZJ6.2C,6.16-6.4V,500mW,DO-	1	S.A	
DZV205	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
DZV902	0403-000508	DIODE-ZENER	MTZJ5.6B,5.45-5.73V,500mW,DO	1	S.A	
EL401	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL402	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL403	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL404	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL407	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL408	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL801	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL802	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL803	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EY401	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY402	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY403	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY404	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY405	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY406	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY407	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY408	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY409	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY410	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY411	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY412	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
EY413	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY414	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY415	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY416	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY417	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY418	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY419	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY420	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY421	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY422	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY423	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY424	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY425	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY426	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY427	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY428	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY429	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY430	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY431	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY432	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY433	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY434	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY435	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY601	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY602	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY603	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY604	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY801	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY8018	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY8019	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY802	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY803	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY804	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY805	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY806	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY807	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY808	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY809	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY810	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY811	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY812	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY813	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY814	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY815	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY816	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY817	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY818	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY819	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY820	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY821	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY822	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY823	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY824	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY825	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY826	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY827	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY828	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY829	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY830	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY831	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY832	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY833	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY834	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY835	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY836	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY837	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY838	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY839	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY840	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
F101	2901-000297	FILTER-EMI ON BOARD	-,3A,-,3.5x5mm,TP,-	1	S.A	
F101	2901-000297	FILTER-EMI ON BOARD	-,3A,-,3.5x5mm,TP,-	1	S.A	
F101	2901-000297	FILTER-EMI ON BOARD	-,3A,-,3.5x5mm,TP,-	1	S.A	
F101	2901-000297	FILTER-EMI ON BOARD	-,3A,-,3.5x5mm,TP,-	1	S.A	
F801A	3602-000114	FUSE-HOLDER	-,-,30mohm	1	S.A	
F801B	3602-000114	FUSE-HOLDER	-,-,30mohm	1	S.A	
FD801A	3601-001228	FUSE-AXIAL LEAD	125V,10A,FAST-ACTING,EPO	1	S.A	
FD802	3601-000297	FUSE-CARTRIDGE	250V,5A,TIME-LAG,GLASS,5.	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
⚠ FD802S	3601-001163	FUSE-AXIAL LEAD	125V,7A,-,EPOXY,2.4X7.1M	1	S.A	
GT301	AA60-40012F	PIN-GT	4P,2.36PI,6/12/14mm,NYLON66,LOCKI	1	S.N.A	
GT404	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT801	AA60-40012G	PIN-GT	3P,2.36PI,10/5mm,NYLON66,LOCKING	1	S.N.A	
GT804	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT805	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT806	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GTT01	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GTT02	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
IC012	1203-001217	IC-POSI.ADJUST REG.	431,TO-92,3P,4.58MIL	1	S.A	
IC063	AA13-00114A	IC HYBRID	EMPEROR,7,-20~+125,FORMING,18A	1	S.A	
IC112	1103-001171	IC-EEPROM	24C161,2Kx8,DIP,8P,9.2x6.4mm,2	1	S.A	
IC202	1203-001943	IC-VOL. DETECTOR	7025,TO-92,3P,-,PLASTIC	1	S.A	
IC301	AA96-00623F	ASSY HEAT SINK P	LA78045,SCREW,AA62-0005	1	S.N.A	
IC602	BP96-00418B	ASSY HEAT SINK P	AA62-30182F,SCREW,TDA72	1	S.N.A	
⚠ IC801S	AA96-50371S	ASSY HEAT SINK P	AA62-30181H,SCREW,STR-X	1	S.N.A	
IC804	AA96-00243K	ASSY HEAT SINK P	-,REGULATOR,AA62-000450	1	S.N.A	
ICT501	BH99-00007T	ASSY HEAT/SINK	BH62-00007A,SCREW,TDA2030	1	S.N.A	
ICV101	2904-001196	FILTER-SAW AV	44MHZ,SIP5K,ST,16.2DB,-,42	1	S.A	
ICV201	AA09-00463B	IC MICOM MTP	VCT4822,VCT49X3F-PY,F1,CT-2	1	S.N.A	
L104	2701-000116	INDUCTOR-AXIAL	10UH,10%,4298	1	S.A	
L106	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,,50	1	S.N.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,,50	1	S.N.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,,50	1	S.N.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,,50	1	S.N.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,,50	1	S.N.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,,50	1	S.N.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,,50	1	S.N.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,,50	1	S.N.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,,50	1	S.N.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,,50	1	S.N.A	
L406	2004-001402	R-METAL(S)	6.8Kohm,1%,1/2W,AA,TP,2.4x6.4	1	S.A	
L424	2701-000142	INDUCTOR-AXIAL	1UH,10%,2534	1	S.A	
L605	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
L606	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
L607	2701-000177	INDUCTOR-AXIAL	33UH,10%,2534	1	S.A	
L608	2701-000177	INDUCTOR-AXIAL	33UH,10%,2534	1	S.A	
L705	2701-000177	INDUCTOR-AXIAL	33UH,10%,2534	1	S.A	
L706	2701-000177	INDUCTOR-AXIAL	33UH,10%,2534	1	S.A	
L808	2701-001030	INDUCTOR-AXIAL	43UH,10%,4514	1	S.A	
L825	2701-000142	INDUCTOR-AXIAL	1UH,10%,2534	1	S.A	
LV101	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
LV201	2701-000143	INDUCTOR-AXIAL	1UH,10%,3070	1	S.A	
LV202	2701-000143	INDUCTOR-AXIAL	1UH,10%,3070	1	S.A	
LV203	2701-000143	INDUCTOR-AXIAL	1UH,10%,3070	1	S.A	
LV204	2701-000115	INDUCTOR-AXIAL	10UH,10%,3070	1	S.A	
LV205	2701-000159	INDUCTOR-AXIAL	22UH,10%,4298	1	S.A	
LV206	2701-000184	INDUCTOR-AXIAL	4.7UH,10%,2534	1	S.A	
LV251	2701-000116	INDUCTOR-AXIAL	10UH,10%,4298	1	S.A	
LV252A	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
LV252B	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
LV253	2702-001094	INDUCTOR-RADIAL	10uH,10%,4x6mm	1	S.A	
LV601	2701-000115	INDUCTOR-AXIAL	10UH,10%,3070	1	S.A	
LV701	2701-000142	INDUCTOR-AXIAL	1UH,10%,2534	1	S.A	
LV702	2701-000142	INDUCTOR-AXIAL	1UH,10%,2534	1	S.A	
LV703	2701-000142	INDUCTOR-AXIAL	1UH,10%,2534	1	S.A	
LV704	2701-000168	INDUCTOR-AXIAL	3.3UH,5%,2534	1	S.A	
LV705	2701-000168	INDUCTOR-AXIAL	3.3UH,5%,2534	1	S.A	
LV901	2701-000143	INDUCTOR-AXIAL	1UH,10%,3070	1	S.A	
LV902	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
LV903	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
LV904	2701-000116	INDUCTOR-AXIAL	10UH,10%,4298	1	S.A	
LV905	2701-000158	INDUCTOR-AXIAL	22UH,10%,2534	1	S.A	
⚠ LX801S	AA29-00011A	FILTER LINE NOISE	CZ32W8,-,0.20MAX,1.5KV	1	S.A	
M0014	AA97-16528B	ASSY AUTO-MAIN	CL29Z30MQTXXAZ,KS7D,TIME	1	S.N.A	
M0018	AA97-16687A	ASSY MICOM	T-TIMNKU-1701,KS7D,20060404,A	1	S.N.A	
M0020	AA96-04061A	ASSY BOARD P	CL29Z30MQ,S-AMERICA	1	S.N.A	
M0081	6003-000335	SCREW-TAPTITE	RH,+,2S,M3,L8,ZPC(YEL),SWR	1	S.N.A	
M0081	6003-000334	SCREW-TAPTITE	RH,+,2S,M3,L6,ZPC(YEL),SWR	1	S.N.A	
M0081	6003-000334	SCREW-TAPTITE	RH,+,2S,M3,L6,ZPC(YEL),SWR	1	S.N.A	
M0081	6003-000334	SCREW-TAPTITE	RH,+,2S,M3,L6,ZPC(YEL),SWR	1	S.N.A	
M0081	6003-000335	SCREW-TAPTITE	RH,+,2S,M3,L8,ZPC(YEL),SWR	1	S.N.A	
M0081	6003-000333	SCREW-TAPTITE	RH,+,2S,M3,L10,ZPC(YEL),SW	1	S.N.A	
M0081	6003-000333	SCREW-TAPTITE	RH,+,2S,M3,L10,ZPC(YEL),SW	1	S.N.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
P803T	1404-001264	THERMISTOR-PTC	4.5OHM,+30/-20%,220V,290V	1	S.A	
⚠ PC801S	0604-001032	PHOTO-COUPLER	TR,170-260%,300mW,DIP-4,ST	1	S.A	
Q401	AA96-00624A	ASSY HEAT SINK P	-,POWER,AA62-00057A,KSD	1	S.N.A	
Q403	0502-001007	TR-POWER	KSC2073-H2,NPN,25W,TO-220,ST,6	1	S.A	
Q409	0505-001723	FET-SILICON	FQP630TSTU,N,200V,9A,0.4OHM,	1	S.A	
Q409	0505-000109	FET-SILICON	2N7000,N,60V,200mA,5ohm,400m	1	S.A	
Q409	0505-000109	FET-SILICON	2N7000,N,60V,200mA,5ohm,400m	1	S.A	
Q409	0505-000109	FET-SILICON	2N7000,N,60V,200mA,5ohm,400m	1	S.A	
Q802	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
Q805	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
Q806	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
Q811	0501-000369	TR-SMALL SIGNAL	KSC2331-Y,NPN,1000mW,TO-	1	S.A	
Q814	0501-000369	TR-SMALL SIGNAL	KSC2331-Y,NPN,1000mW,TO-	1	S.A	
QE02	AA96-00624G	ASSY HEAT SINK P	SCREW,AA62-00057B,FQP63	1	S.N.A	
QV202	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
QV203	0501-000283	TR-SMALL SIGNAL	KSA539,PNP,400mW,TO-92,T	1	S.A	
QV204	0501-000283	TR-SMALL SIGNAL	KSA539,PNP,400mW,TO-92,T	1	S.A	
QV205	0501-000283	TR-SMALL SIGNAL	KSA539,PNP,400mW,TO-92,T	1	S.A	
QV207	0501-000010	TR-SMALL SIGNAL	KSC1008,NPN,800mW,TO-92,	1	S.A	
QV272	0501-000283	TR-SMALL SIGNAL	KSA539,PNP,400mW,TO-92,T	1	S.A	
QV273	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
QV901	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
QV902	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
QV905	0501-000010	TR-SMALL SIGNAL	KSC1008,NPN,800mW,TO-92,	1	S.A	
QV951	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
R104	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R107	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R205	2001-000613	R-CARBON	3.9KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R302	2004-001984	R-METAL(S)	26.7Kohm,1%,1/2W,AA,TP,2.4x6.	1	S.A	
R304	2008-001015	R-FUSIBLE(S)	1.5ohm,5%,2W,AF,TP,3.9x10mm	1	S.A	
R305	2008-001013	R-FUSIBLE(S)	1.2ohm,5%,2W,AF,TP,3.9x10mm	1	S.A	
R306	2001-000016	R-CARBON(S)	1OHM,5%,1/2W,AA,TP,2.4X6.4MM	1	S.A	
R309	2003-002205	R-METAL OXIDE(S)	330ohm,5%,2W,AG,TP,3.9X	1	S.A	
R310	2003-002205	R-METAL OXIDE(S)	330ohm,5%,2W,AG,TP,3.9X	1	S.A	
R311	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R314	2004-005054	R-METAL(S)	39KOHM,1%,1/2W,AA,TP,2.4X6.4M	1	S.A	
R315	2004-005054	R-METAL(S)	39KOHM,1%,1/2W,AA,TP,2.4X6.4M	1	S.A	
R316	2004-001397	R-METAL(S)	4.7Kohm,1%,1/2W,AA,TP,2.4x6.4	1	S.A	
R401	2001-001187	R-CARBON(S)	75OHM,5%,1/2W,AA,TP,2.4X6.4M	1	S.A	
R402	2001-001070	R-CARBON(S)	120OHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R404	2001-001114	R-CARBON(S)	270OHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R405	2001-001153	R-CARBON(S)	47ohm,5%,1/2W,AA,TP,2.4x6.4m	1	S.A	
R407	2003-002193	R-METAL OXIDE(S)	33Kohm,5%,2W,AG,TP,3.9X	1	S.A	
R408	2003-002193	R-METAL OXIDE(S)	33Kohm,5%,2W,AG,TP,3.9X	1	S.A	
R411	2004-002022	R-METAL(S)	51Kohm,1%,1/2W,AA,TP,2.4x6.4m	1	S.A	
R413	2008-000253	R-FUSIBLE(S)	0.47ohm,5%,1W,AF,TP,3.9x10m	1	S.A	
R414	2008-000253	R-FUSIBLE(S)	0.47ohm,5%,1W,AF,TP,3.9x10m	1	S.A	
R415	2004-000861	R-METAL	39Kohm,1%,1/4W,AA,TP,2.4x6.4mm	1	S.A	
R416	2004-001390	R-METAL(S)	1Kohm,2%,1/2W,AA,TP,2.4x6.4mm	1	S.A	
R417	2004-005051	R-METAL(S)	2.2KOHM,1%,1/2W,AA,TP,2.4X6.4	1	S.A	
R418	2008-000292	R-FUSIBLE(S)	3.3ohm,5%,2W,AF,TP,3.9x10mm	1	S.A	
R420	2004-000412	R-METAL	18Kohm,1%,1/4W,AA,TP,2.4x6.4mm	1	S.A	
R423	2003-001042	R-METAL OXIDE(S)	5.6Kohm,5%,2W,AF,TP,3.9	1	S.A	
R426	2003-000540	R-METAL OXIDE(S)	1Kohm,5%,2W,AF,TP,4x12m	1	S.A	
R450	2008-000294	R-FUSIBLE(S)	33ohm,5%,2W,AF,TP,3.9x10mm	1	S.A	
R459	2008-001011	R-FUSIBLE(S)	0.18ohm,10%,2W,AF,TP,3.9x10	1	S.A	
R499	2001-001186	R-CARBON(S)	75KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R607	2001-000472	R-CARBON	2.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R608	2001-000472	R-CARBON	2.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R609	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R619	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R620	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R621	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R622	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R802	2003-000586	R-METAL OXIDE(S)	22Kohm,5%,2W,AF,TP,4x12	1	S.A	
R803	2003-000586	R-METAL OXIDE(S)	22Kohm,5%,2W,AF,TP,4x12	1	S.A	
R804	2003-000586	R-METAL OXIDE(S)	22Kohm,5%,2W,AF,TP,4x12	1	S.A	
R805	2001-001088	R-CARBON(S)	1KOHM,5%,1/2W,AA,TP,2.4X6.4M	1	S.A	
R806	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R807	2001-000037	R-CARBON(S)	330OHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R808	2001-001150	R-CARBON(S)	470KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
R809	2001-001150	R-CARBON(S)	470KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
R810	2001-001097	R-CARBON(S)	2.4KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
R811	2009-001012	R-METAL PLATE	0.27OHM,10%,5W,CL,TP,5X14X	1	S.A	
R812	2001-000977	R-CARBON	8.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R813	2009-001012	R-METAL PLATE	0.27OHM,10%,5W,CL,TP,5X14X	1	S.A	
R815	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R816	2004-001891	R-METAL(S)	133Kohm,1%,1/2W,AA,TP,2.5x6.5	1	S.A	
R817	2001-001088	R-CARBON(S)	1KOHM,5%,1/2W,AA,TP,2.4X6.4M	1	S.A	
R818	2001-001131	R-CARBON(S)	33KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R819	2004-001983	R-METAL(S)	2.49Kohm,1%,1/2W,AA,TP,2.4x6.	1	S.A	
R820	2001-001088	R-CARBON(S)	1KOHM,5%,1/2W,AA,TP,2.4X6.4M	1	S.A	
R821	2004-001891	R-METAL(S)	133Kohm,1%,1/2W,AA,TP,2.5x6.5	1	S.A	
R823	2003-002020	R-METAL OXIDE(S)	56Kohm,5%,2W,AF,TP,3.9x	1	S.A	
R824	2003-002020	R-METAL OXIDE(S)	56Kohm,5%,2W,AF,TP,3.9x	1	S.A	
R825	2003-000762	R-METAL OXIDE(S)	6.8ohm,5%,2W,AF,TP,4x12	1	S.A	
R827	2008-001011	R-FUSIBLE(S)	0.18ohm,10%,2W,AF,TP,3.9x10	1	S.A	
R829	2001-001078	R-CARBON(S)	15KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R830	2001-001078	R-CARBON(S)	15KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R831	2001-001078	R-CARBON(S)	15KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R832	2001-001079	R-CARBON(S)	15OHM,5%,1/2W,AA,TP,2.4X6.4M	1	S.A	
R833	2001-000007	R-CARBON	3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R834	2008-000205	R-FUSIBLE(S)	10ohm,5%,1/2W,AF,TP,2.5x6.5	1	S.A	
R837	2008-000290	R-FUSIBLE(S)	2.4ohm,5%,2W,AF,TP,3.9x10mm	1	S.A	
R841	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R846	2001-001077	R-CARBON(S)	150OHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R848	2003-000664	R-METAL OXIDE(S)	33ohm,5%,2W,AF,TP,4x12m	1	S.A	
R849	2008-000205	R-FUSIBLE(S)	10ohm,5%,1/2W,AF,TP,2.5x6.5	1	S.A	
R850	2008-000252	R-FUSIBLE(S)	0.47ohm,10%,1/2W,AF,TP,2.5x	1	S.A	
R851	2001-001088	R-CARBON(S)	1KOHM,5%,1/2W,AA,TP,2.4X6.4M	1	S.A	
R895	2001-001152	R-CARBON(S)	47KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R898	2008-000290	R-FUSIBLE(S)	2.4ohm,5%,2W,AF,TP,3.9x10mm	1	S.A	
R930	2001-000989	R-CARBON	820KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R939	2001-000522	R-CARBON	22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R941	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R942	2001-000995	R-CARBON	820OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R944	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RL801	3501-001053	RELAY-POWER	5Vdc,530mW,10000mA,1FormA,15	1	S.A	
RL909	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RL910	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
⚠ RR09S	2001-000005	R-CARBON	390ohm,5%,1/8W,AA,TP,1.8x3.2mm	1	S.A	
⚠ RR10S	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RT501	2008-001047	R-FUSIBLE(S)	68ohm,5%,2W,AF,TP,3.9x10mm	1	S.A	
RT502	2001-000052	R-CARBON(S)	3.3KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
RT503	2001-001126	R-CARBON(S)	300OHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
RT504	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RT505	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RT506	2001-001071	R-CARBON(S)	12KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
RT507	2001-001040	R-CARBON(S)	0.68OHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
RT508	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RT509	2008-001047	R-FUSIBLE(S)	68ohm,5%,2W,AF,TP,3.9x10mm	1	S.A	
RV101	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
RV102	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
RV105	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV106	2001-000977	R-CARBON	8.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV107	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV108	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV109	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV110	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV111	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV112	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV113	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV201	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV202	2001-000221	R-CARBON	1.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV206	2001-000878	R-CARBON	6.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV207	2001-000020	R-CARBON(S)	22OHM,5%,1/2W,AA,TP,2.4X6.4M	1	S.A	
RV208	2001-000362	R-CARBON	150OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV209	2001-000362	R-CARBON	150OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV210	2001-000362	R-CARBON	150OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV212	2001-000780	R-CARBON	470OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV213	2001-000666	R-CARBON	33OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV214	2001-000780	R-CARBON	470OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV215	2001-000666	R-CARBON	33OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV216	2001-000780	R-CARBON	470OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV217	2001-000666	R-CARBON	33OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV221	2001-000977	R-CARBON	8.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV222	2001-000221	R-CARBON	1.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV223	2001-000554	R-CARBON	270OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV224	2001-000052	R-CARBON(S)	3.3KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
RV225	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV230	2001-001168	R-CARBON(S)	6.8KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
RV232	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV233	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV234	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
RV252	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV256	2001-000554	R-CARBON	270OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV257	2001-000232	R-CARBON	1.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV258	2001-000252	R-CARBON	1.6Kohm,5%,1/8W,AA,TP,1.8x3.2mm	1	S.A	
RV271	2001-000938	R-CARBON	68OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV272	2001-000005	R-CARBON	390ohm,5%,1/8W,AA,TP,1.8x3.2mm	1	S.A	
RV273	2001-000660	R-CARBON	33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV274	2001-000331	R-CARBON	12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV275	2001-000005	R-CARBON	390ohm,5%,1/8W,AA,TP,1.8x3.2mm	1	S.A	
RV276	2001-000780	R-CARBON	470OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV701	2001-000969	R-CARBON	75OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV702	2001-000969	R-CARBON	75OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV703	2001-000969	R-CARBON	75OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV704	2001-000969	R-CARBON	75OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV705	2001-000969	R-CARBON	75OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV902	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV903	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV904	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV905	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV906	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV907	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV908	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV909	2001-000007	R-CARBON	3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV911	2001-000347	R-CARBON	13KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV912	2001-000347	R-CARBON	13KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV913	2001-000005	R-CARBON	390ohm,5%,1/8W,AA,TP,1.8x3.2mm	1	S.A	
RV920	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV922	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV923	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV924	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV925	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV926	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV927	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
RV928	2001-000969	R-CARBON	75OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV929	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV930	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV934	2001-000924	R-CARBON	680OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV940	2001-000003	R-CARBON	330ohm,5%,1/8W,AA,TP,1.8x3.2mm	1	S.A	
RV941	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV951	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV952	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RV999	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
⚠ RX801S	2002-001010	R-COMPOSITION	1.8Mohm,5%,1/2W,AA,TP,3.7x	1	S.A	
⚠ RY801S	2002-001012	R-COMPOSITION	8.2Mohm,5%,1/2W,AA,TP,3.7x	1	S.A	
T0010	AA27-00056B	COIL CHOKE	600uH,YL9N 15x27.5 C:9.5,0.12	1	S.A	
T0010	AA27-00057B	COIL CHOKE	10mH,YL-9N 15x27.5 C:9.5,0.3m	1	S.A	
T0010	AA27-00067A	COIL CHOKE	-,240uH,YL9N 12x20 C:6.0,0.12	1	S.A	
T0066	AA62-30182F	HEAT SINK-ES	CS29M6,A6063S,T2.0,26.2,52.	1	S.N.A	
T0066	AA62-30181H	HEAT SINK-ES	-,AL6063 EXTR.,2,WHT,50MM,-	1	S.N.A	
T0077	AA41-01206B	PCB MAIN	CL29Z30MQ,FR-1,1,00,1.6,245X330	1	S.N.A	
T0081	BH62-00007A	HEAT SINK-TR	-,T1.0,L20*H30,CDA	1	S.N.A	
T0085	1201-002118	IC-AUDIO AMP	TDA7297SA,ZIP,15P,-,DUAL,32	1	S.A	
T0087	1203-003954	IC-POSI.FIXED REG.	KA78R05CTU,TO-220F,4P	1	S.A	
T0087	1203-001944	IC-POSI.FIXED REG.	78RM33,TO-220,3P,-,PL	1	S.A	
T0087	1203-003950	IC-POSI.FIXED REG.	KA7808ETSTU,TO-220,3P	1	S.A	
T0088	1204-002183	IC-VERTICAL PROCESSO	LA78045,TO220,7P,15	1	S.A	
T0105	AA60-30001A	WASHER-PLATE	M3,ID3.5,15X8.5,T1.0,SBHG	1	S.N.A	
T0175	AA62-00045A	HEAT SINK-PS	-,-,T1.0,-,-,DREAM,-,-,-,-,	1	S.N.A	
T0175	AA62-00056A	HEAT SINK-PS	-,-,T1.0,-,41*35*70,D2,-,-,	1	S.N.A	
T0175	AA62-00057B	HEAT SINK-PS	CT-29K12P,A1050S,1.0,41,60,	1	S.N.A	
T0175	AA62-00057A	HEAT SINK-PS	-,-,T1.0,-,41*20*60,D2,-,-,	1	S.N.A	
T0245	0202-001522	SOLDER-WIRE FLUX	LFA3-107,-,D1.2,96.5Sn/	0.025	S.N.A	
T0296	AA27-00035B	COIL LINEARITY	30uH,DR15x18,11.0mm,19x45	1	S.A	
T0607	AA61-01390A	BRACKET-IC	CT-29A20HR,SECC,T1.0	1	S.N.A	
T0900	1404-001045	THERMISTOR-NTC	4.7ohm,4.565A,2900K,-,-,-	1	S.A	
T401	AA26-50001M	TRANS-H.DRIVE	-,-,-,80mH,-,-,520uH,-,-,-	1	S.A	
T444	AA26-00266A	TRANS FBT	FUH29A001V,CORSET2,3.50mH,PM5	1	S.A	
⚠ T801S	AA26-00228C	TRANS SWITCHING	VD082-02,S60A,300V,90~26	1	S.A	
VP801	1405-000152	VARISTOR	560V,2500A,14x8.5mm,TP	1	S.A	
⚠ VX801S	1405-000152	VARISTOR	560V,2500A,14x8.5mm,TP	1	S.A	
XV201	2801-004019	CRYSTAL-UNIT	20.25MHz,30ppm,28-AAM,13pF,	1	S.A	
	0502-001136	TR-POWER	KSD5703,NPN,70W,TO-3PF,ST,8-	1	S.A	

ASSY FIXING

T0892	AA91-09860C	ASSY FIXING	CL29Z40MQTXGSU,KS7D,TIME COP	1	S.N.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
⚠ T0268	AA39-10006X	CBF-POWER CORD	-,-,KKP419C,3P,-,-,BLK,-,	1	S.A	
M2893	AA39-20010B	LEAD CONNECTOR	,1P,500,YFH800-01,S,1617#	1	S.A	
T0010	AA61-20284A	HOLDER	P-CORD,PP,-,-,-,BLK,VO,KE-002	1	S.N.A	
T0527	AA65-00029A	CLAMPER CORE-WIRE	PJTV,NYLON66,OD24,DONG	1	S.N.A	
T0527	AA65-30018A	CLAMPER CORE-WIRE	DONG-A,NYLON-66,-,-,-,	1	S.N.A	
T0527	AA65-30111A	CLAMPER CORE-WIRE	ALL MODEL,NYLON,V0,WHT	1	S.N.A	
M0081	6003-001023	SCREW-TAPTITE	PWH,+,B,M3,L10,ZPC(YEL),SW	2	S.N.A	
T0070	AA61-01424A	HOLDER-CHASSIS	32Z30,HIPS V0,T2.0,G4309,	1	S.N.A	

ASSY BOX

M0003	AA92-11530W	ASSY BOX	CL29Z40MQTXXAO	1	S.N.A	
T0130	AA69-03420N	BOX-00,SET	29Z40(OVERSEA),DY-06,AB,YEL,A	1.01	S.N.A	

ASSY P/MATERIAL

M0113	AA92-11531B	ASSY P/MATERIAL	29Z40	1	S.N.A	
T0376	6902-000001	BAG AIR	LDPE,T0.2,L1800,W1000,TRP,,,LDPE	0.015	S.N.A	
T0524	6902-000007	BAG PE	HDPE/NITRON/HDPE,T0.015/T0.5/T0.0	1	S.N.A	
T0376	6902-000061	BAG AIR	LDPE,T0.2,L1000,W500,TRP,,,	0.05	S.N.A	
T0214	AA60-40006A	PIN-STAPLE	AUTO,33X17.8X2.4,H18,33X17.8X	6	S.N.A	
T0172	AA69-02609A	BAND-PP	W18,CLEA,1G	5.75	S.N.A	

ASSY ACCESSORY

M0045	AA92-11549F	ASSY ACCESSORY	CL29Z40MQTXXAO	1	S.N.A	
T0251	3721-000136	PLUG-CONVERSION	2P,4.0mm,N,NI	1	S.A	
T0524	6902-000009	BAG PE	HDPE,T0.03,L400,W240,TRP,8,2,PE M	1	S.N.A	
T0116	AA39-40001B	CABLE RCA	,3P,1500MM,RED/WHT/YEL,RCA,RCA	1	S.A	
T0074	AA59-00385A	REMOCON	TIMECOP,TM85,39,INTERACE,NTSC,NO	1	S.A	
0	AA68-03242F	MANUAL FLYER-01,SAFETY GUIDE	All Model,S	1	S.N.A	
T0238	AA68-03727A	MANUAL FLYER-WARRANTY CARD	All,SAMSUNG,S	1	S.N.A	
M0596	AA68-03806A	MANUAL USERS-00	Comm,Samsung,English,S.A	1	S.N.A	
M0596	AA68-03806B	MANUAL USERS-00	Comm,Samsung,Spanish,S.A	1	S.N.A	

ASSY CPT

T0521	AA91-07877Q	ASSY CPT	A68QFZ893X001,0MG,29 INCH	1	S.N.A	
T0090	AA27-00314A	COIL DEGAUSSING-TILT	TILT,CPTTV,33.5mH,2	1	S.A	
T0527	AA65-00056A	CLAMPER CORE-WIRE	32Z30,NYLON-66,V0,NTR	4	S.N.A	
T0527	AA65-00061A	CLAMPER CORE-D,COIL	NYLON-66,VO,NTR	4	S.N.A	
T0603	AA96-04062A	ASSY TBC WIRE P	K64A,29,NTSC,2P	1	S.N.A	
M0909	AA72-00030A	SPONGE	29Z30,CR VO BLK,T2.0,10,540	2	S.N.A	
T0089	AA27-00359A	COIL DEGAUSSING	CORSET,9.45mH,130Turns,4	1	S.A	
⚠ T0063	AA03-00486A	CRT COLOR	A68QFZ893X101,0,1.10,13.3,1.33	1	S.A	

ASSY COVER FRONT

M0001	AA90-05506W	ASSY COVER FRONT	CL29Z40MQTXXAO	1	S.N.A	
M0081	6003-001026	SCREW-TAPTITE	RH,+,B,M4,L15,ZPC(BLK),SWR	9	S.A	
M0081	6003-001026	SCREW-TAPTITE	RH,+,B,M4,L15,ZPC(BLK),SWR	2	S.A	
M0081	6003-001268	SCREW-TAPTITE	TH,+,B,M4,L12,ZPC(YEL),SWR	2	S.N.A	
M0081	6003-001268	SCREW-TAPTITE	TH,+,B,M4,L12,ZPC(YEL),SWR	1	S.N.A	
T0238	AA60-10050V	BOLT-HEX	-,SWRCH18A,M6,L30,HH,+,WC,-,Z	4	S.N.A	
T0569	AA61-00813D	SUPPORT-CRT	29Z30(SLIM),HIPS V0,T2.0,GR5	2	S.N.A	
T0609	AA63-60004Z	SPACER-GUM,CRT	ALL MODEL,NTR RUBBER,-,-,	4	S.N.A	
T0003	AA96-04032F	ASSY COVER P-FRONT	29Z40,SEM,HIPS HB,GR5	1	S.A	
M0081	6003-001268	SCREW-TAPTITE	TH,+,B,M4,L12,ZPC(YEL),SWR	1	S.N.A	
M0081	6006-001096	SCREW-TAPTITE	BH,+,WP,B,M4.0,L12,ZPC(BLK	4	S.N.A	
T0069	AA60-00091J	SPACER-FELT	-,FELT,330X10,-,-,BLK,T0.5,-	1	S.N.A	
T0069	AA60-00091R	SPACER-FELT	,FELT,250X10,,,BLK,T0.5,,	2	S.N.A	
CIS7	AA61-60003J	SPRING ETC-CS	-,SUS304,-,-,OD6,N7,OD6,-,	1	S.N.A	
M0112	AA63-01365F	COVER-FRONT	29Z40,HIPS,HB,SEM,GR503,SV01	1	S.N.A	
T0057	AA64-01062B	BADGE-BRAND	ALL,AL,T1.5,10.6,L65,BLK.SIL	1	S.N.A	
T0023	AA64-04328A	KNOB POWER	Z40,ABS,HB,GR515,SVM3012	1	S.N.A	
T0238	AA64-04329A	WINDOW REMOCON-LED	Z40(HQ,SAMEX),PC,CLEA	1	S.N.A	
CIS3	AA64-04333A	DECORATION-POWER	Z40,ABS,HB,GR515,AL	1	S.N.A	
T0175	AA96-03164A	ASSY SPEAKER P	8ohm,6*13cm,Z31,10W,SPK+W	1	S.A	
T0382	BP61-00509C	HOLDER-CARE	PJT,ACRYL-FOAM,T0.25,W20.0mm	0.28	S.N.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
T0382	BP61-00495C	HOLDER-CARE	PJT,ACRYL-FOAM,T0.25,W30.0mm	0.2	S.N.A	

ASSY COVER REAR

M0002	AA90-05507L	ASSY COVER REAR	CL29Z40MQTXGSU	1	S.N.A	
M0006	AA63-01372B	COVER-REAR	29Z40(SAMEX),HIPS,HB,BK500,K6	1	S.A	
T0578	AA64-04297J	INLAY AV	32Z30,PS,SHEET,T0.5,K63A	1	S.N.A	
T0066	AA64-04345C	INLAY-BACK	29Z40(SEA),PS,SHEET,T0.5,KS7D	1	S.N.A	
T0522	AA65-30008A	CLAMPER CORE-CORD	-,PE,HB,-,BLK,-	1	S.N.A	
T0069	AA60-00091K	SPACER-FELT	-,FELT,330X10,-,-,BLK,T0.35,	4	S.N.A	

6. Troubleshooting

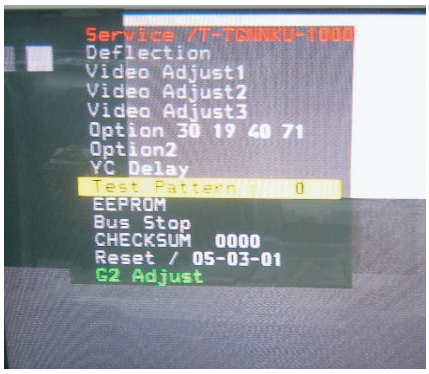
6-1 Checkpoints by Error Mode

■ Power LED: Check that the LED works when turning the Tact Switch ON/OFF

■ LED Indicators: See table 6-2-1 Basic Troubleshooting: LED Diagnosis on the Front Panel.

■ In case of a power failure or abnormal screen, check the following items.
1) Check that the power cord is correctly connected to electrical source equipment.
2) Check that the Tact Switch has been pressed.
3) Check that the signal cable is properly connected.
4) Check that channel setting has been set.

■ When the picture is abnormally displayed on the screen, display the Test pattern and check the adjustment status.



■ Troubleshooting Mechanism :

- The System Blcok has the last output terminal, VCTI, which shows the internal Test pattern.
- The Power Block supplies power to the Deflection Block
- The System Block receives all signal inputs, the signal-processed signal is sent to CRT Ass'y.

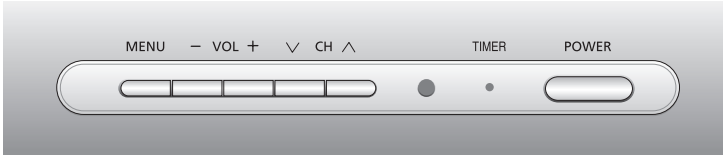
Deflection and focus are controlled by the Deflection Block

Troubleshooting by Modules

1) Enter Service Mode
   (In SET STANDBY status, if you press "Mute", "1", "8", "2" and "Power" in sequence on the remote control, the screen is turned on and the Service Mode screen appears.)
2) Check if the System Block is out of order.
   Press OPTION → TEST PATTERN → Right direction key:
   The TOSHIBA pattern,COLOR BAR, BLACK pattern and WHITE pattern etc are displayed on the screen.
   If the pattern is not displayed or is displayed abnormally, the VCTI or the System Block is out of order.
3) Check if the Power BLOCK, which supplies power to the System block and the Deflection blcok, is out of order.
   If you cannot turn the screen on by pressing the POWER ON/OFF button or the screen repeatedly turns on and off when pressing the POWER ON/Off button, check if the Power BLOCK is out of order.
4) Check if the Deflection Block is out of order.
   When the screen is not properly displayed and the left or right side of the picture is shrunk, or the top or bottom of the screen is expanded or shrunk, check if the Deflection Blcok is out of order.

6-2 Troubleshooting Procedures by Error Modes

6-2-1 Basic Troubleshooting: Diagnosis of LED on the Front Panel

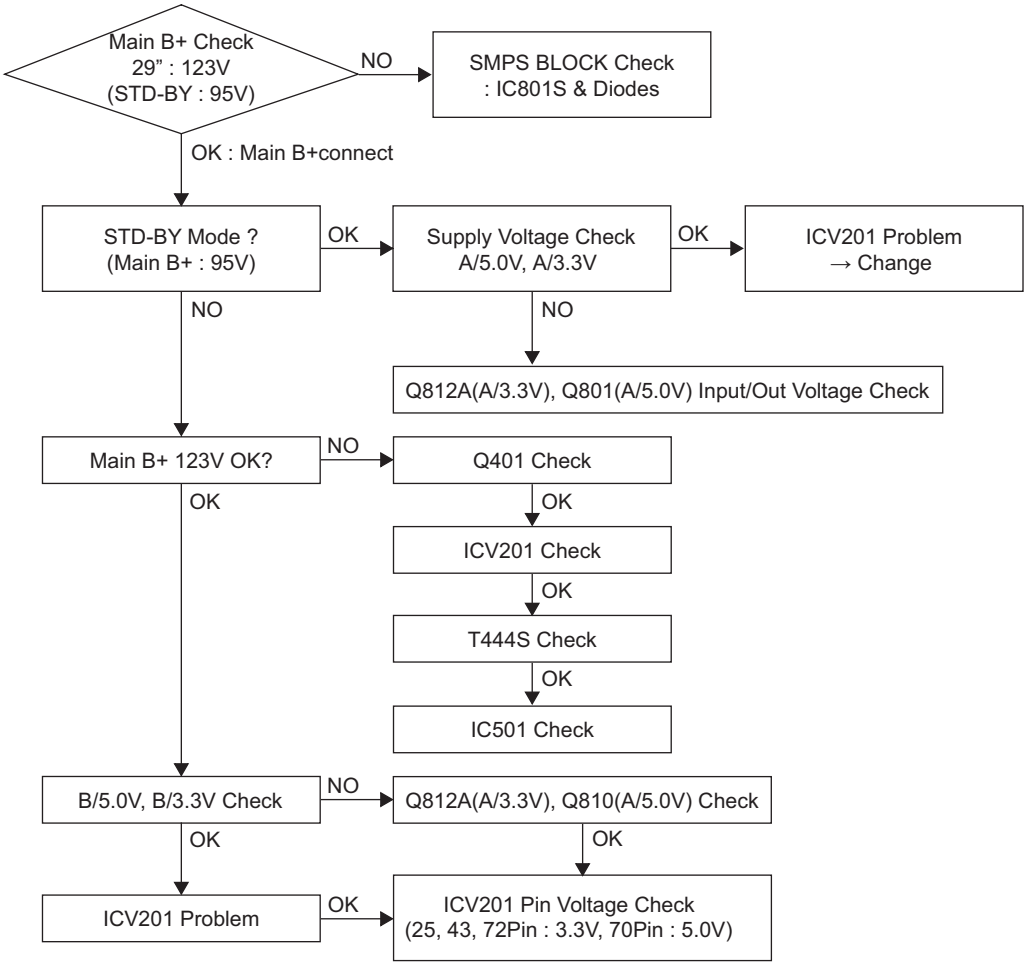


◑ : Light is Blinking
○ : Light is Off

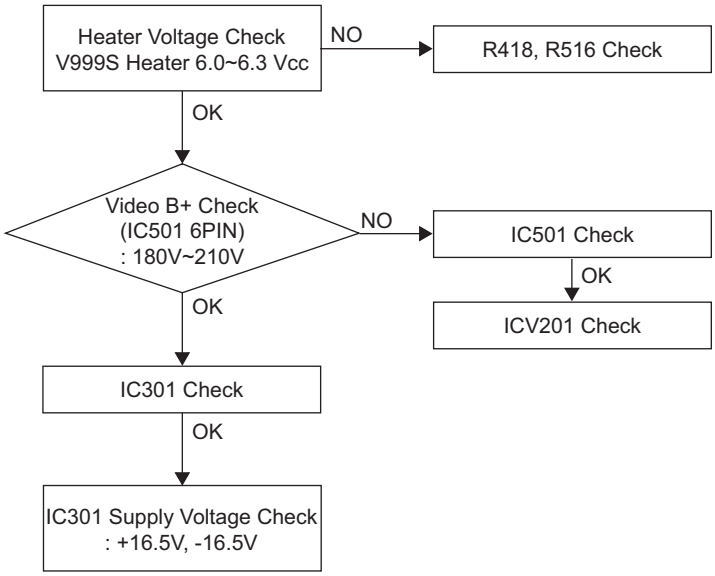
Power	Description
○	This happens when the Tact Switch is not pressed or the power cord is disconnected.
○→◑	If you press the power switch of the or the channel key on the remote control when in St-BY status, the screen will be turned on. If the LED blinks and the screen is not displayed, check the connection between the Power and the Main Board.

6-3 Troubleshooting Procedures by ASS'Y

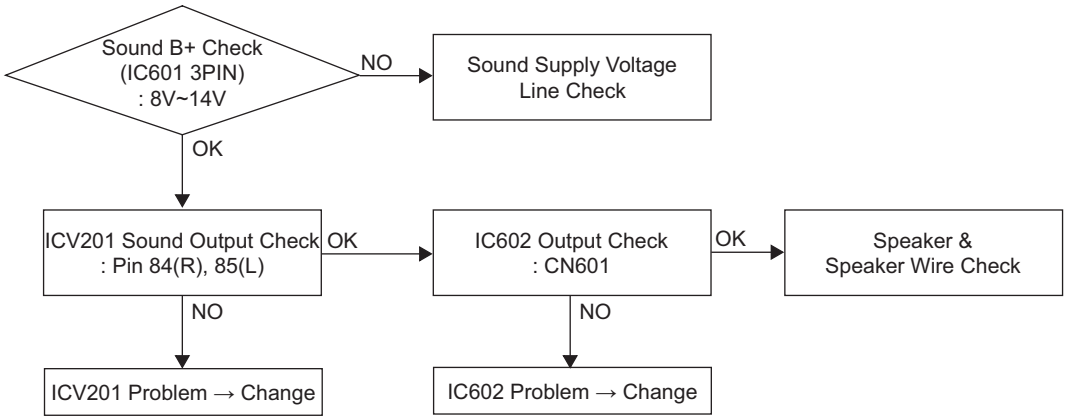
1. NO Power



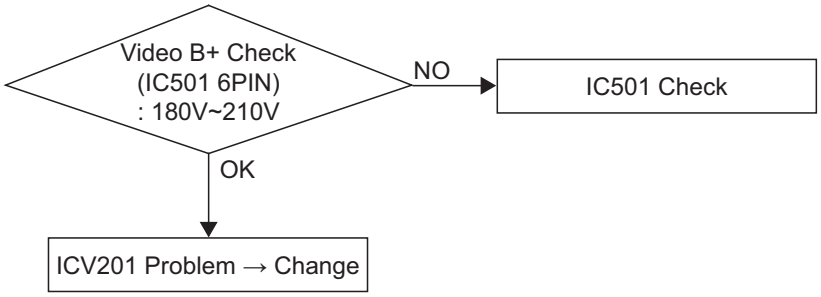
2. NO Video

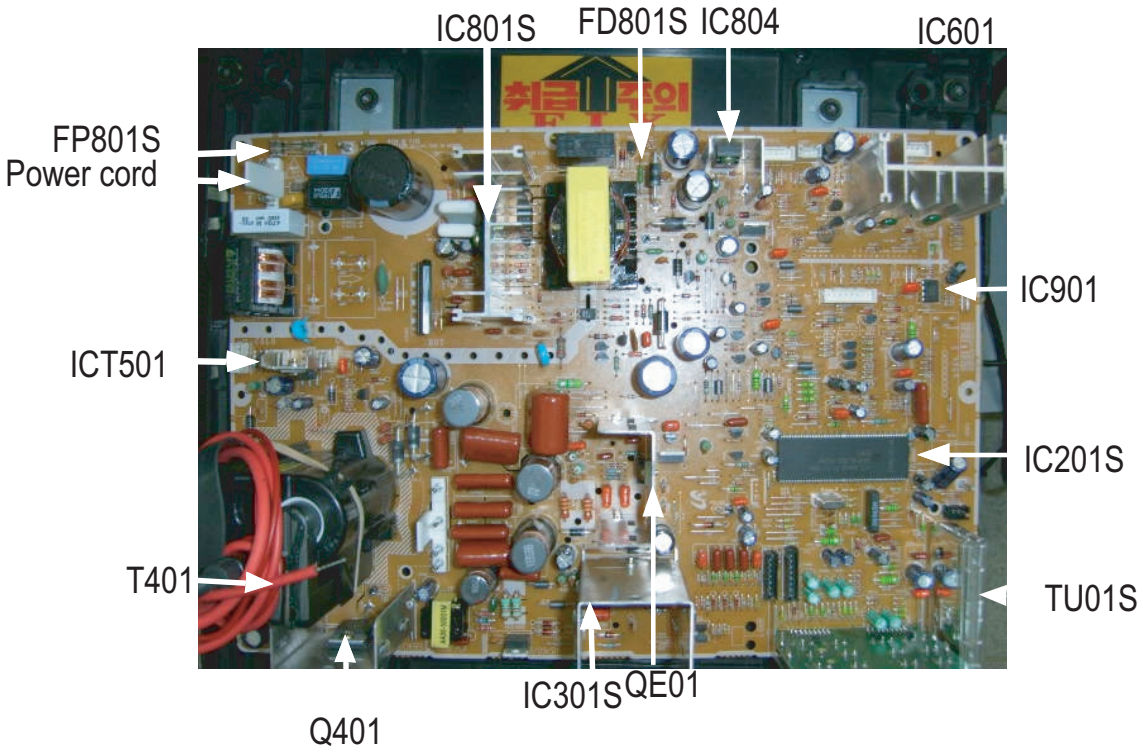


3. NO Sound



4. Fly Back Lion Badness





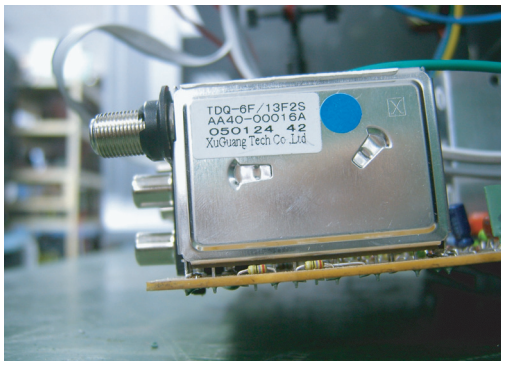
6-4 Troubleshooting by Blocks

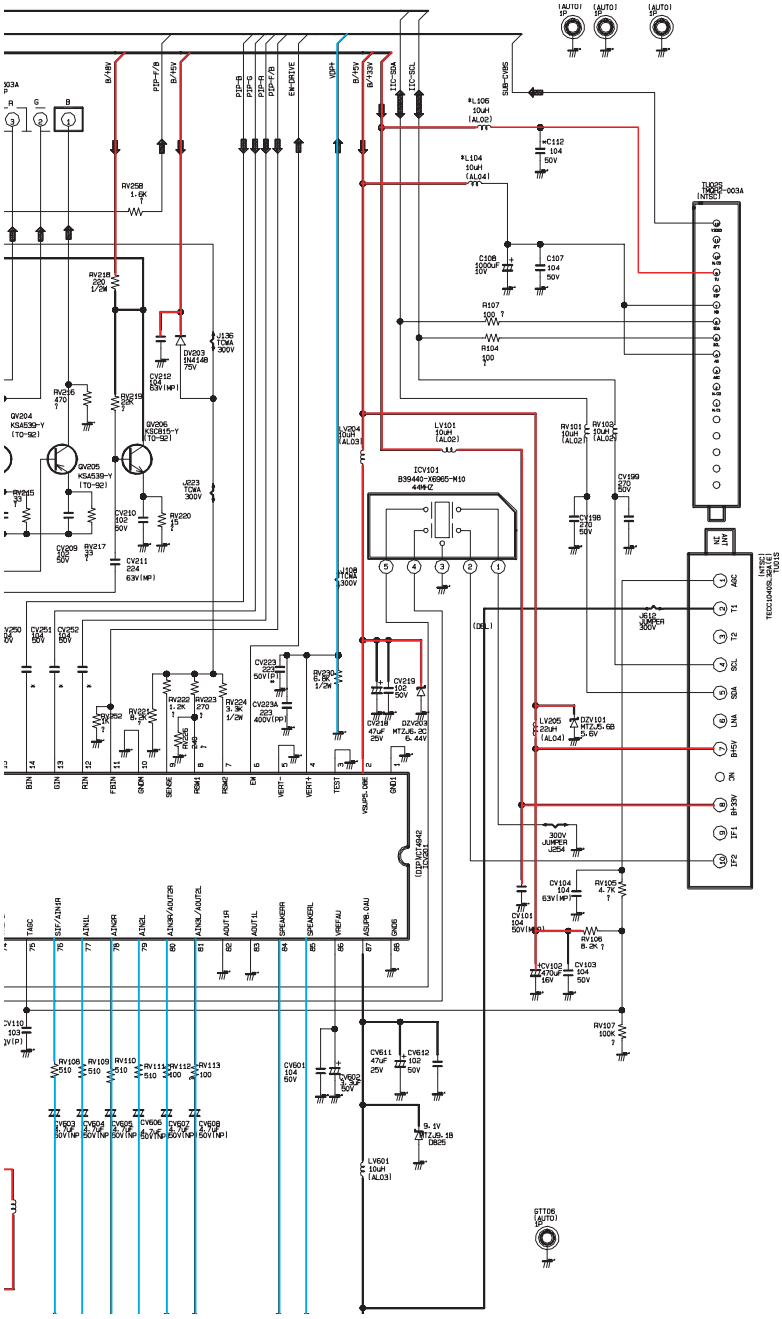
6-4-1 Troubleshooting Main Board

1. Tuner Diagnosis

The RF / CTV signal is transmitted to the Tuner of the Main Board. If the signal is not received, check the following items.

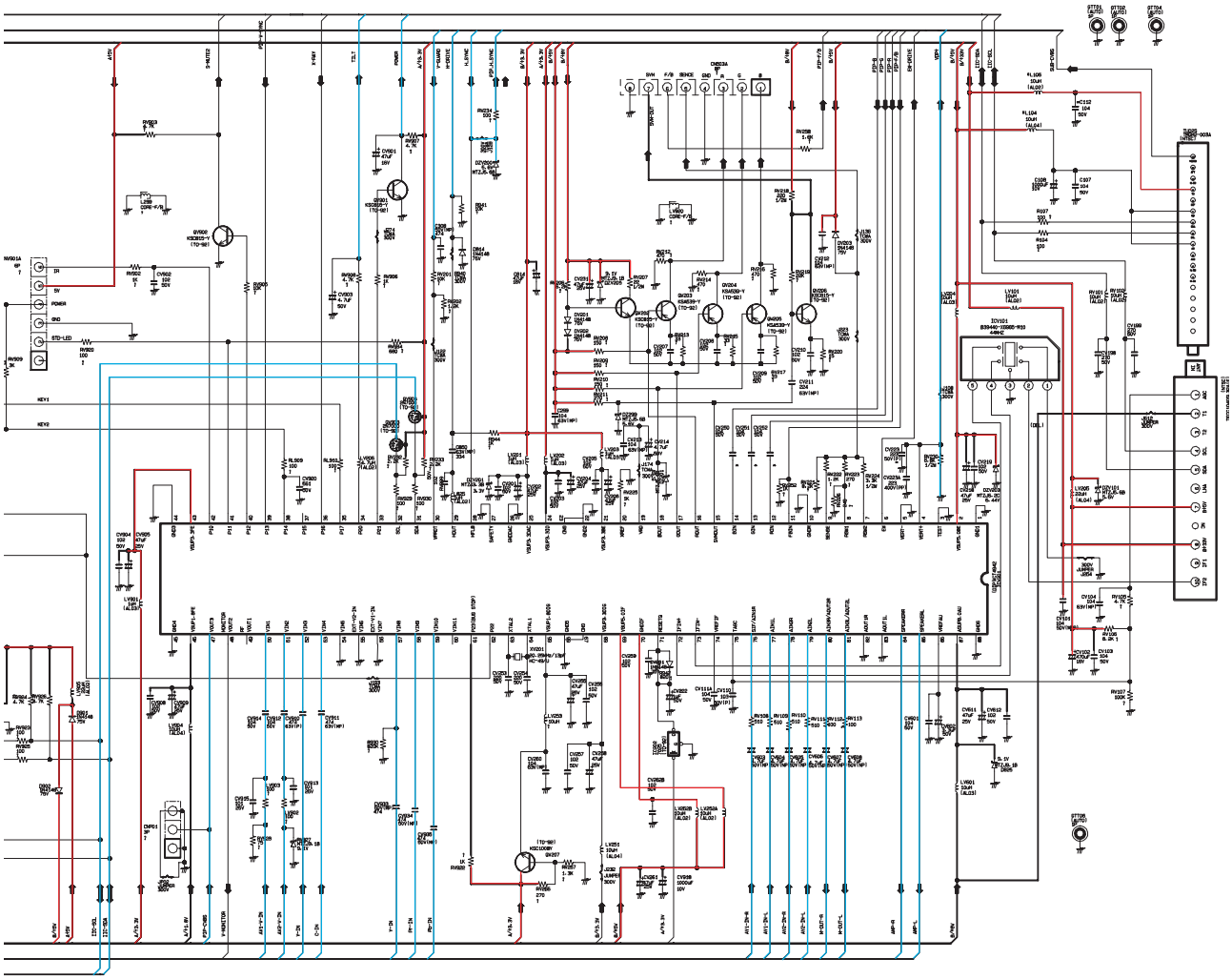
- Power supply: 5V, 33V
- Check for RF defects: Check the IF output
- Check for AUDIO defect: Check the SIF Signal output





2. Micom Diagnosis
VSP/MSP/DRX Block ETC

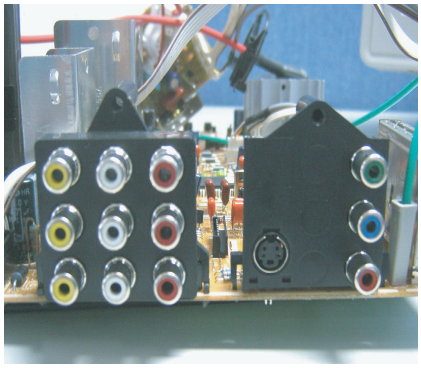
- Power supply: 3.3V, 5V, 8V
- Check for input defects: Y/C(CVBS, S-VHS), 480i Y/Pb/Pr signal

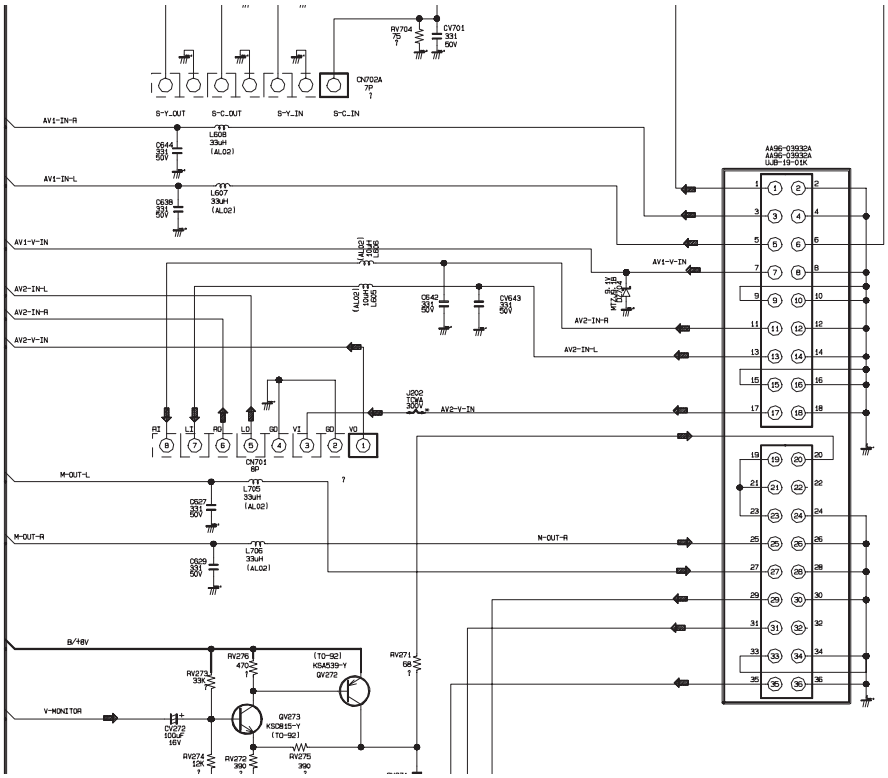


3. External Input Diagnosis

This consists of AV1/2, S-VHS and Component signal inputs as well as monitor output (Video, Audio).
The signals are sent to VCTI and the selected signals are output.
If the signal input or output does not work, check the following items.

- Check for input defects: Check the Micom input pin.
- Check for output defects: Check JAR701 (for RF/AV) or JA701(for comp/S_VHS)

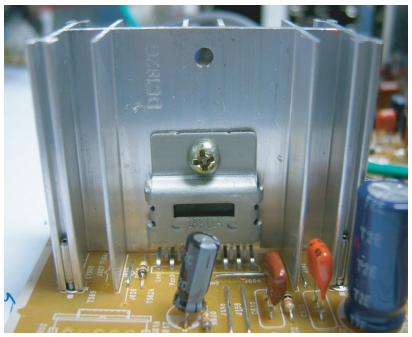


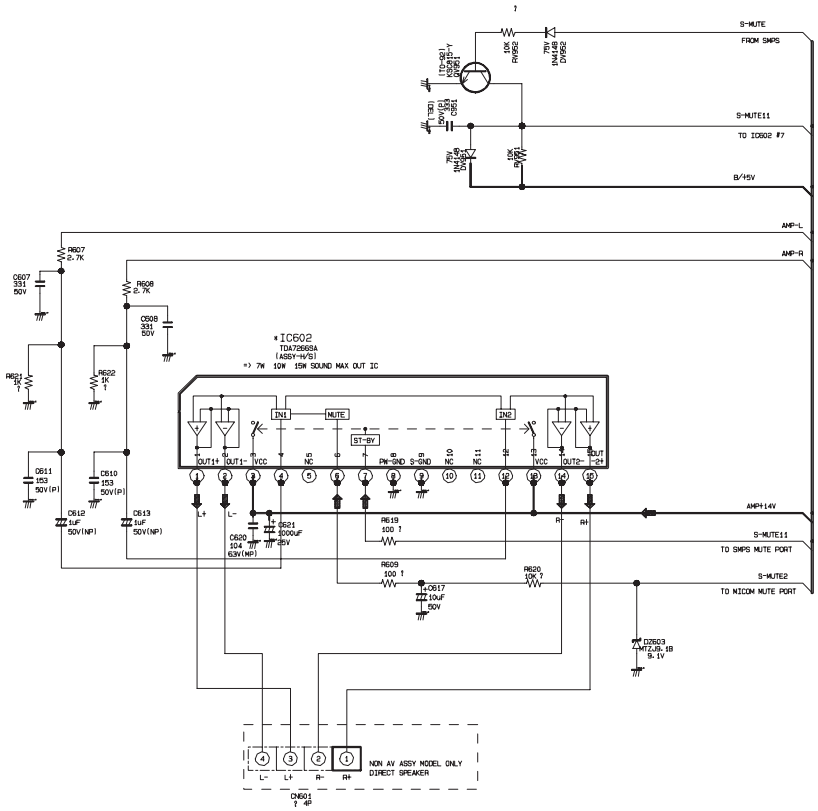


4. TDA7266SA / TDA7297SA (Audio Processor) Diagnosis

This receives the signal from the Audio Processor (VCTI) and outputs the signal in7W+7W / 10W + 10W sound.

- Power supply : 14V
- Check for input defects : AMP-R,AMP-L
- Check for output defects : L+, L-, R+,R-





SOUND OUTOUT & JACK BLOCK

6-4-2 Troubleshooting Deflection Block

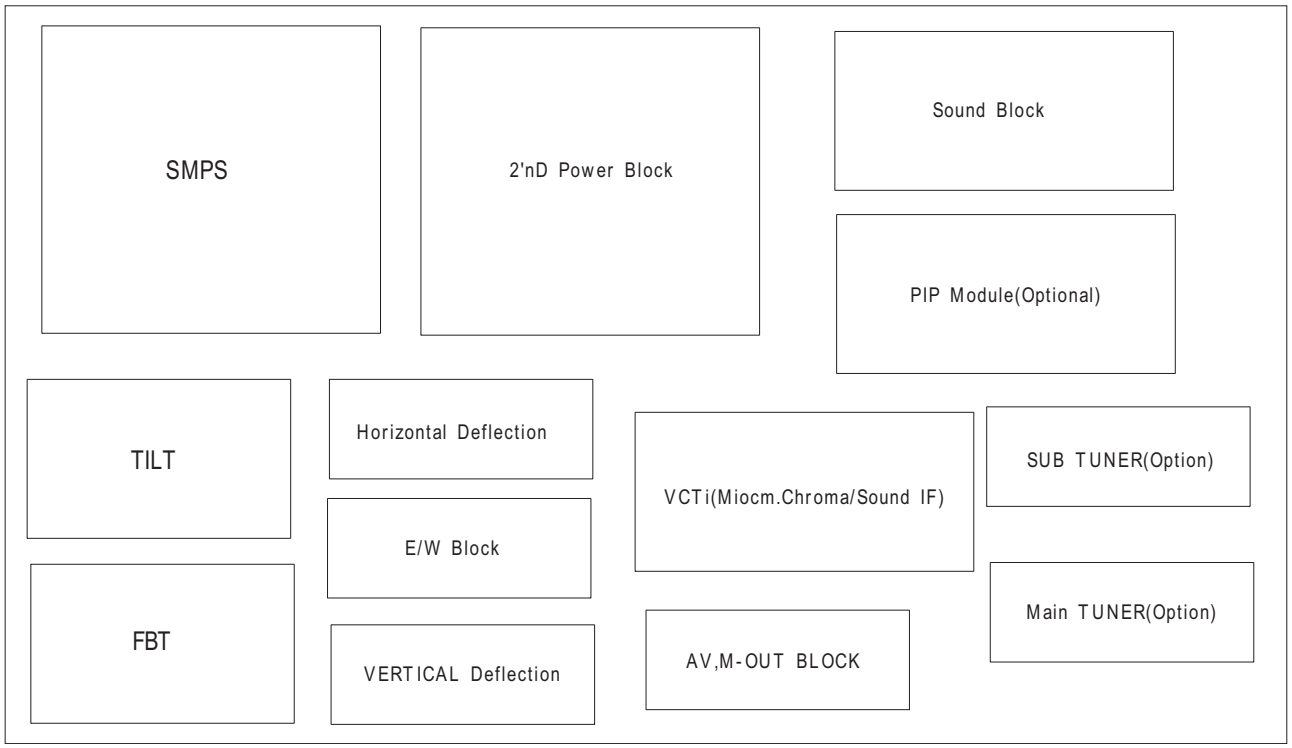
■ Countermeasures by Deflection Types

1. The screen is blank and only the relay repeats close and open when turning the power on.
   ▶ This happens when the vertical voltage or vertical signal is not supplied, and because the Micom operates for 5 to 10 seconds and then turns the power off by force as it cannot detect the vertical signal.

2. CHECK POINT
 - Check that the vertical output voltage is measured in the FBT terminal.
   → VCC (+) : +16.5V
   VCC (-) : -16.5V
   ▶ If you cannot measure the output voltage, check that the collector voltage of the horizontal TR is 1360V.
   If the voltage is measured, the problem is a defect in the FBT unit.
   (When you don't have an oscilloscope, and you can hear the high-voltage sound, you can determine that the horizontal TR is normal.)
 - Is the vertical input waveform output from the VCTI VDP Pin.

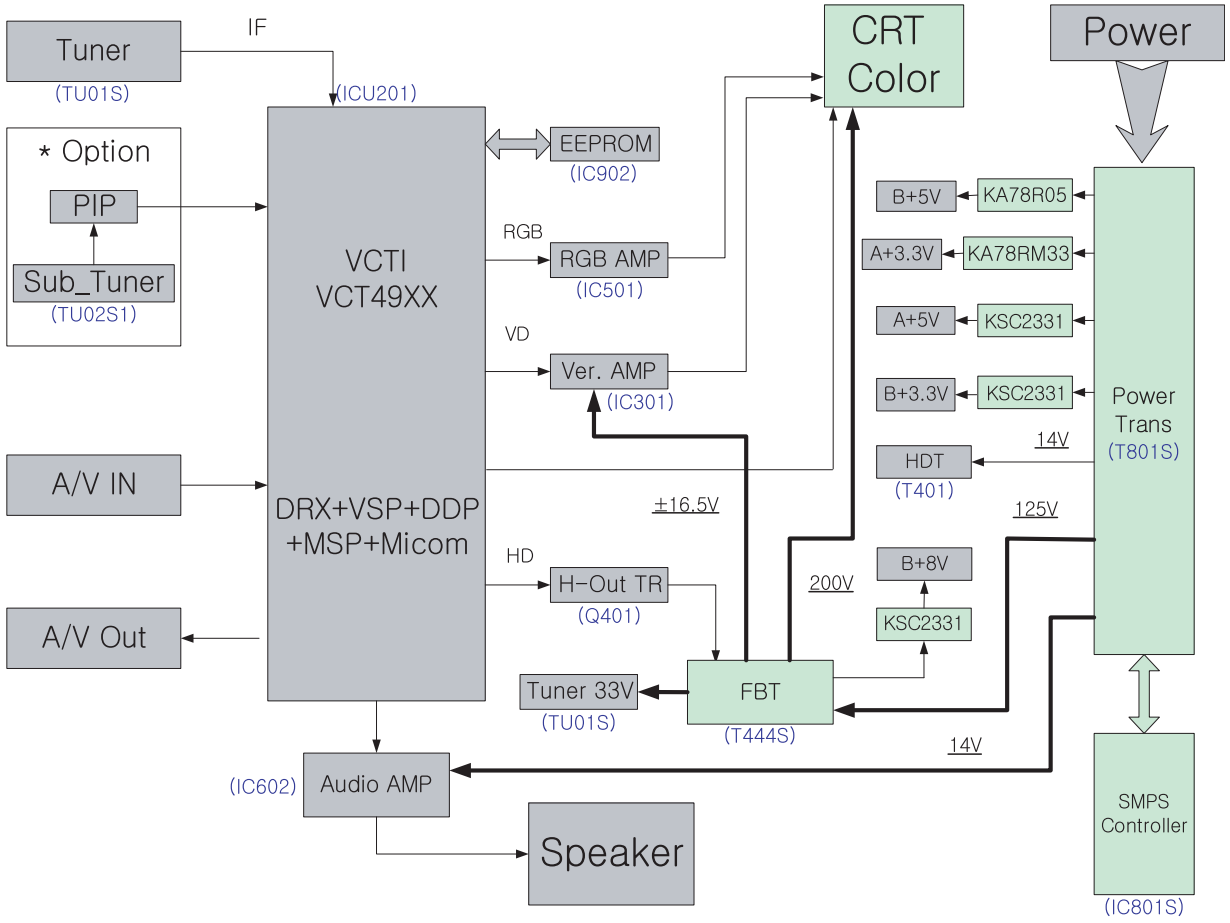
7. Block Diagram

7-1 Overall Block Diagram



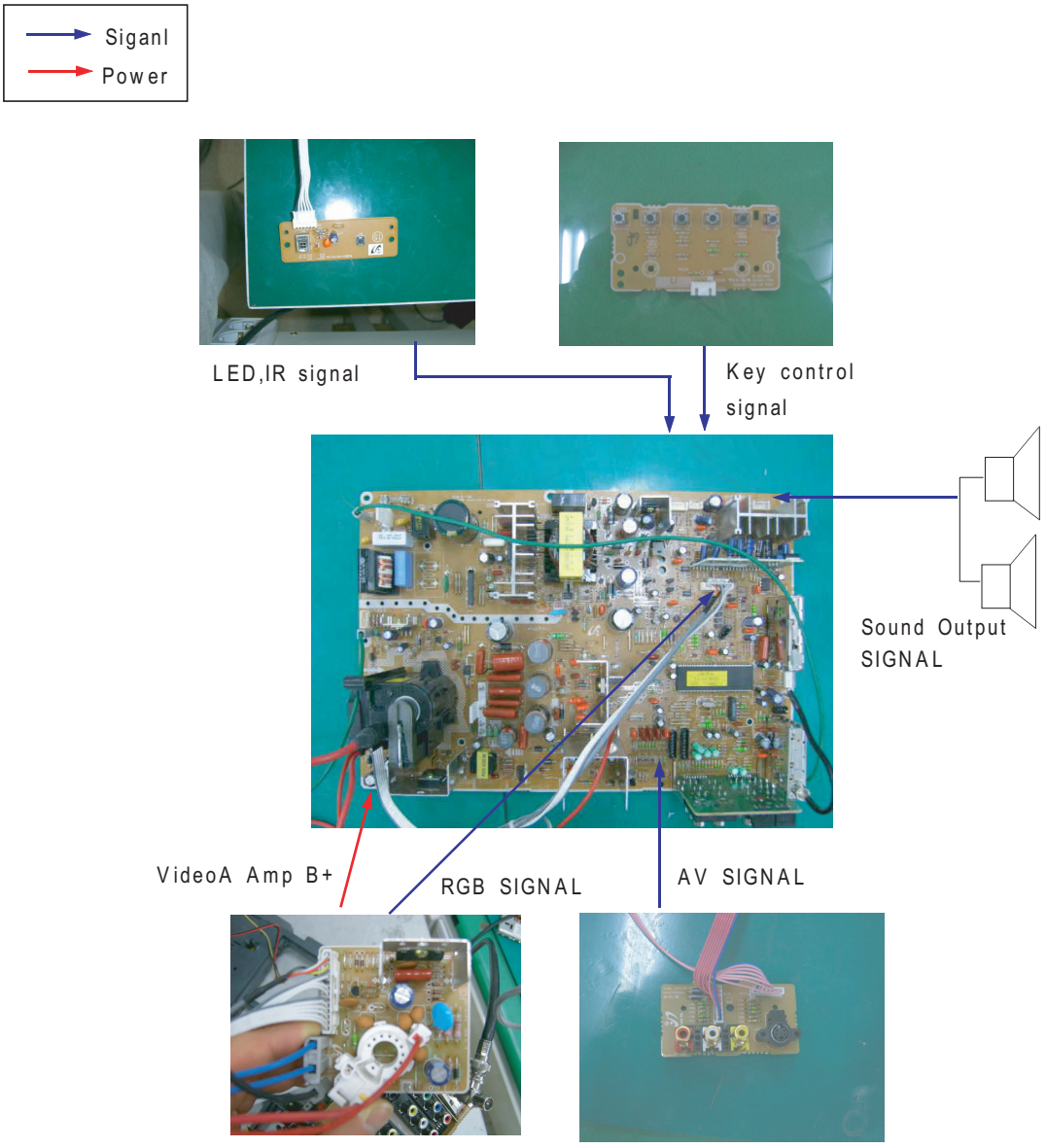
7-2 Partial Block Diagram

7-2-1 System Board Block Diagram

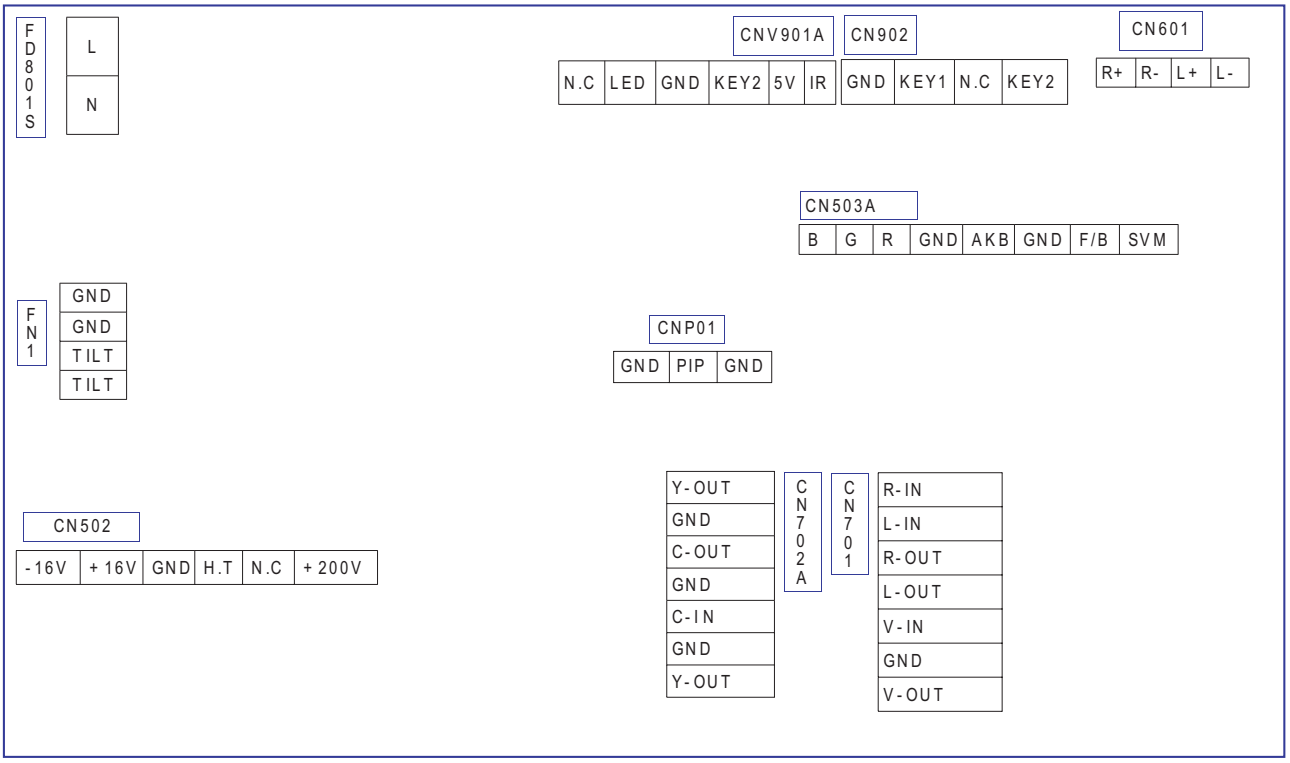


8. Wiring Diagram

8-1 Overall Wiring



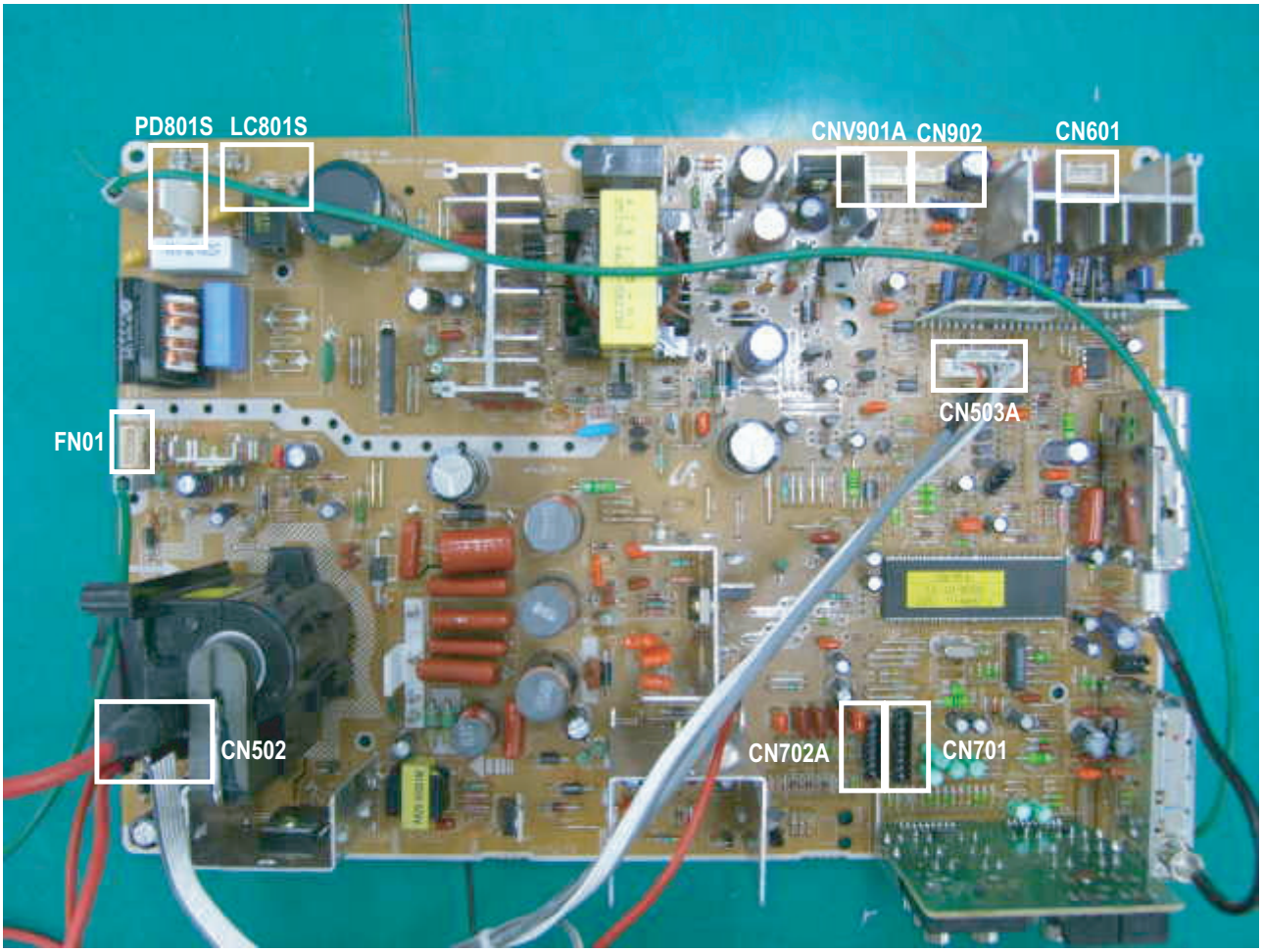
8-2 Pin Connection



9. PCB Diagram

9-1 Main Board

9-1-1 Assy Main Board



9-1-2 Names & Roles of Key Parts

* PD801S : This is a 3P connected to Power-cord.
* FN01 : This is a 4P connected to Tilt-Coil.
* CN502 : This is a 6P connected to Video amp B+,Heater Voltage in CRT PCB.
* CN702A : This is a 7P connected to S-VHS signal in Side AV PCB.
* CN701: This is a 8P connected to AV2 signal in Side AV PCB.
* CN503A : This is a 8P connected from MAIN PCB to CRT PCB for R,G,B,AKB signal.
* CNV901A : This is a 6P connected from Tact,S/W pcb for IR,LED,5V.
* CN902 : This is a 4P connected from Control PCB for Key1,Key2 input signal.
* CN601 : This is a 4P connected to Speaker for Sound output signal.

9-1-3 Main Board Connector Pin

CN601
Connected to the Side Sound Port

PIN No.	Pin Name
1	R -
2	R+
3	L+
4	L-

CN503A
Connected to the CRT Ass'y

PIN No.	Pin Name
1	B
2	G
3	R
4	GND
5	SE
6	GND
7	F/B
8	TILT

CN503B
Connecte to the CRT Ass'y

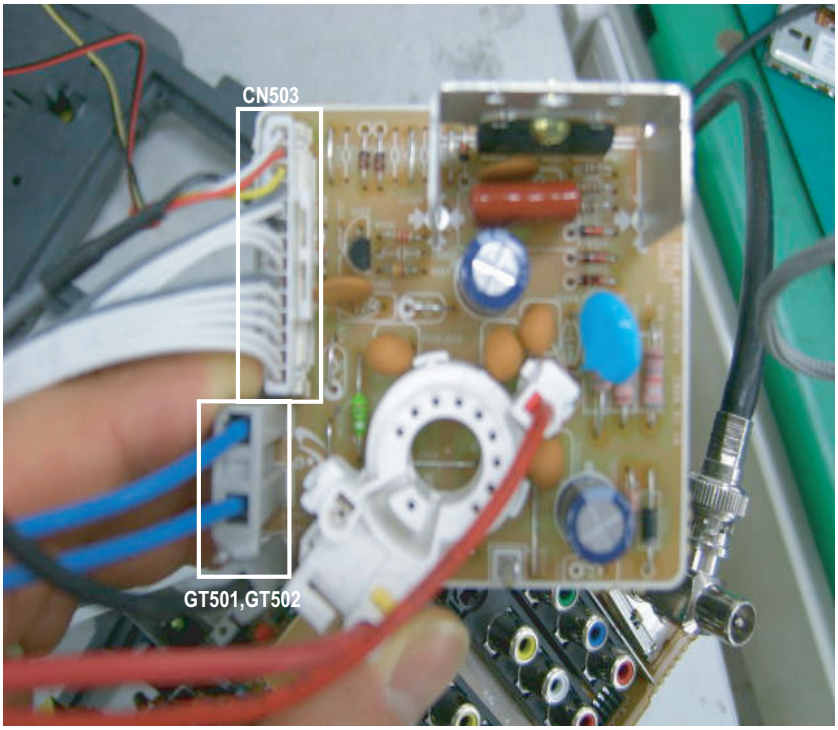
PIN No.	Pin Name
1	-16.5V
2	+16.5V
3	GND
4	HEATER
5	NC
6	200V

CN701
Connected to the Side AV Port

PIN No.	Pin Name
1	VO
2	GND
3	VI
4	GND
5	LO
6	RO
7	LI
8	RI

9-2 CRT Board

9-2-1 Assy CRT Board



■ CRT Drive
This supplies the final R/G/B signal from the Main Board and the CRT deflection signal to the CRT.

9-2-2 Names & Roles of Key Parts

* CN503 : This is a 14P connected from MAIN PCB for R/G/B/AKB/HEATER/B+200V.
* GT501,GT502 : This is a 2P connected to TBC-WIRE.

9-2-3 CRT Board Connector Pin

CN503
Connects the R/G/B signal and power for the CRT and AMP from the Main Board.

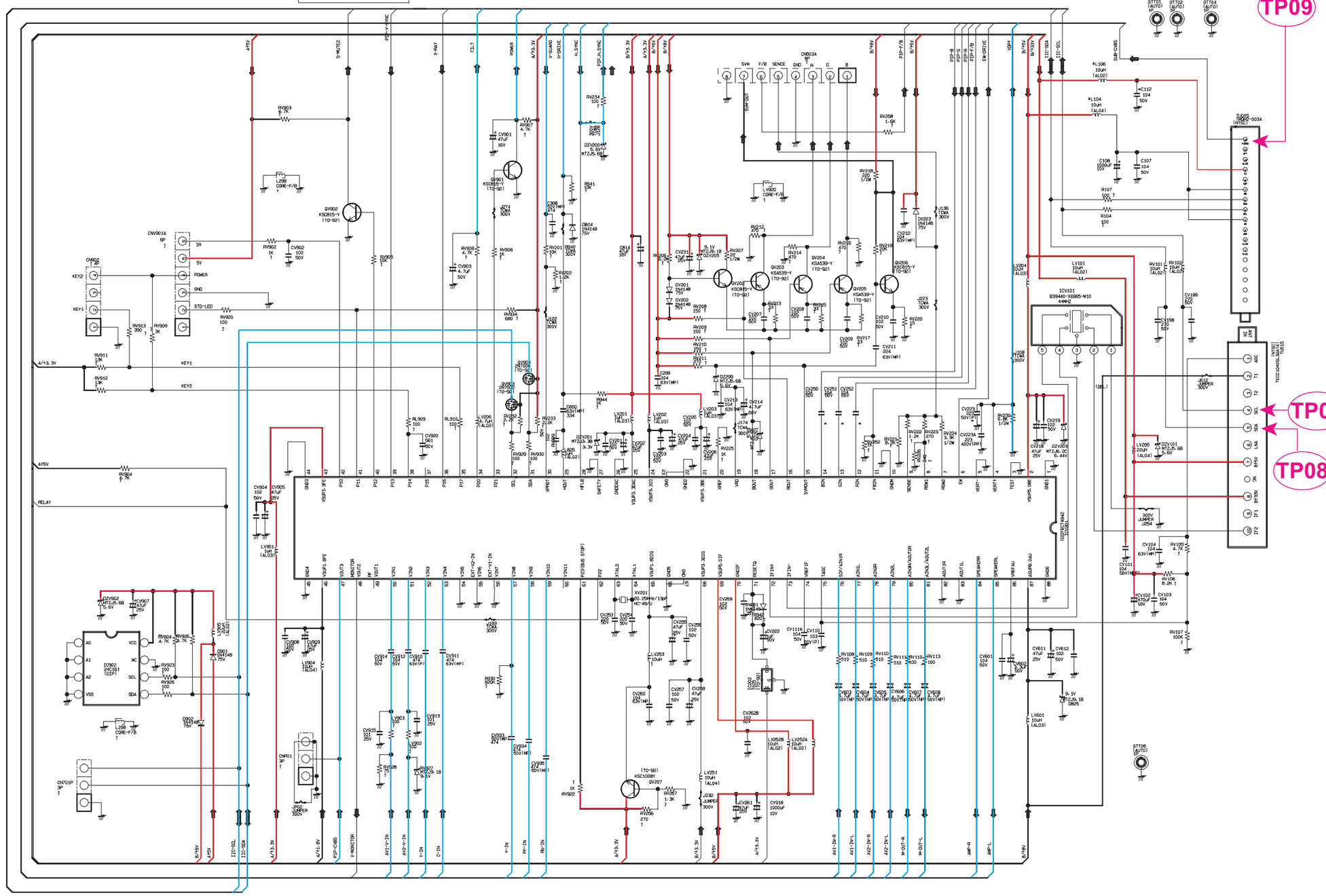
PIN No.	Pin NAME
1	B
2	G
3	R
4	GND
5	SE
6	GND
7	F/B
8	TILT
9	-16.5
10	+16.5
11	GND
12	Heater
13	NC
14	+200V

10. Schematic Diagram

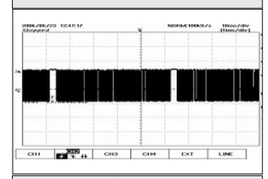
10-1 MAIN

This Document can not be used without Samsung's authorization.

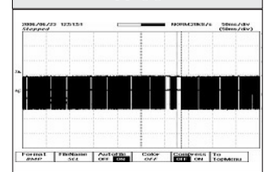
Power
Signal



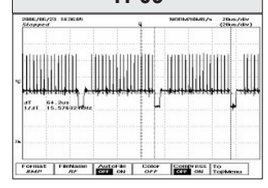
TP07



TP08

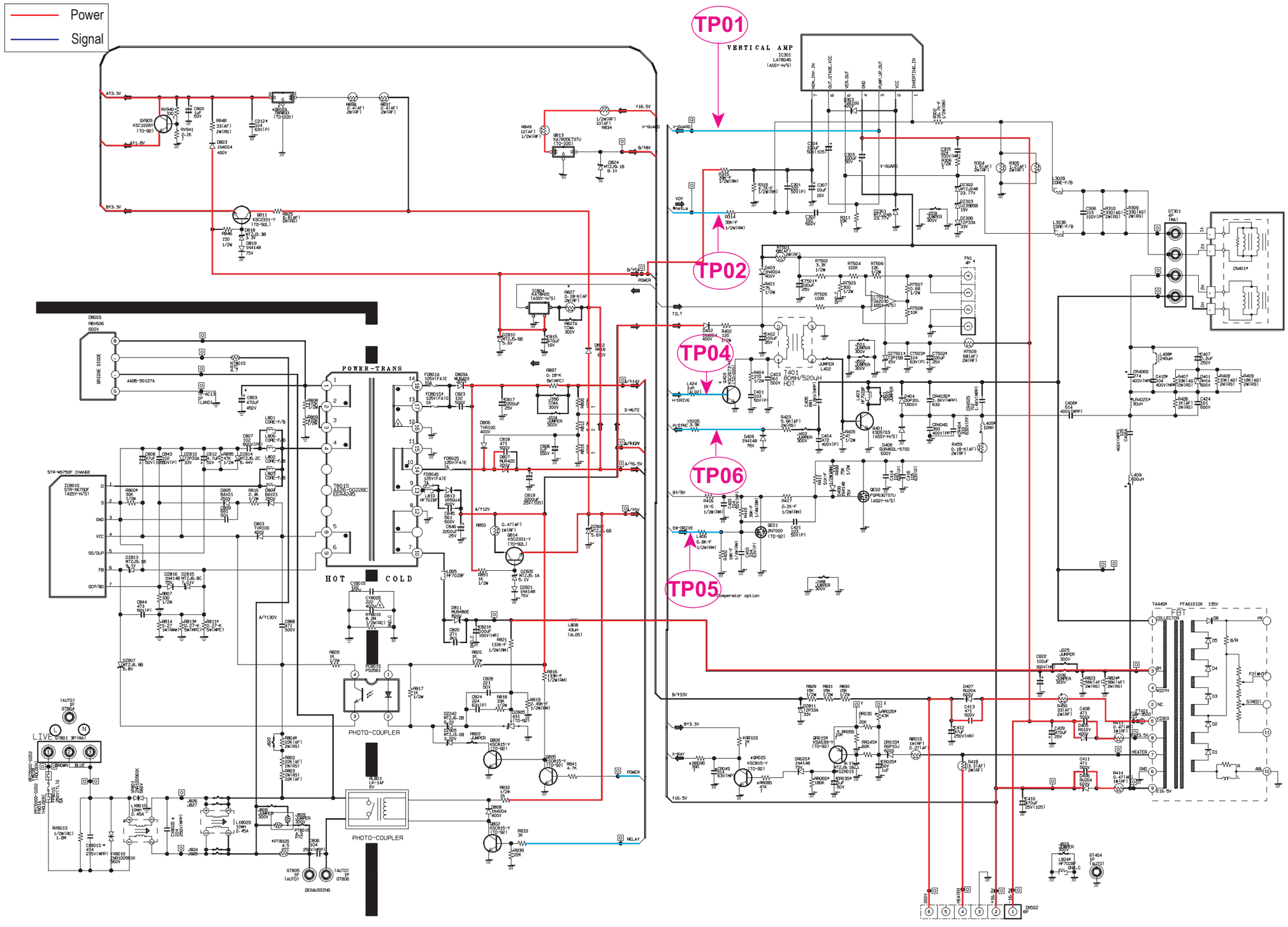


TP09

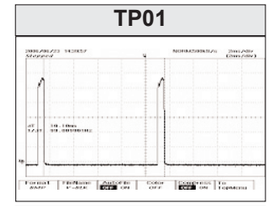


10-2 POWER

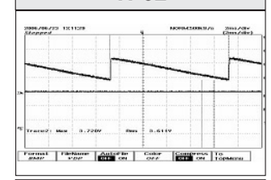
This Document can not be used without Samsung's authorization.



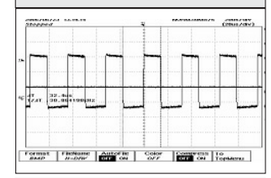
TP01



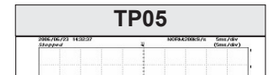
TP02



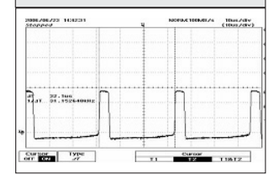
TP04



TP05

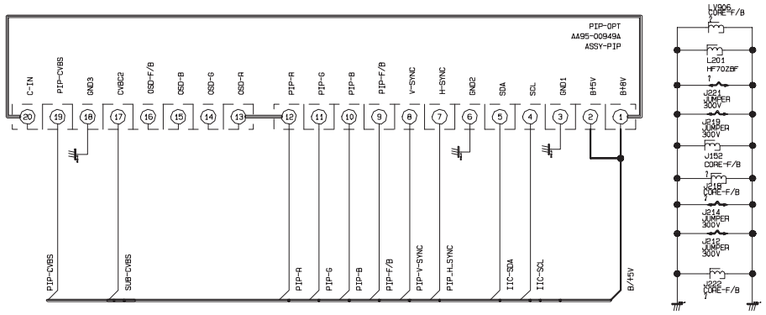


TP06

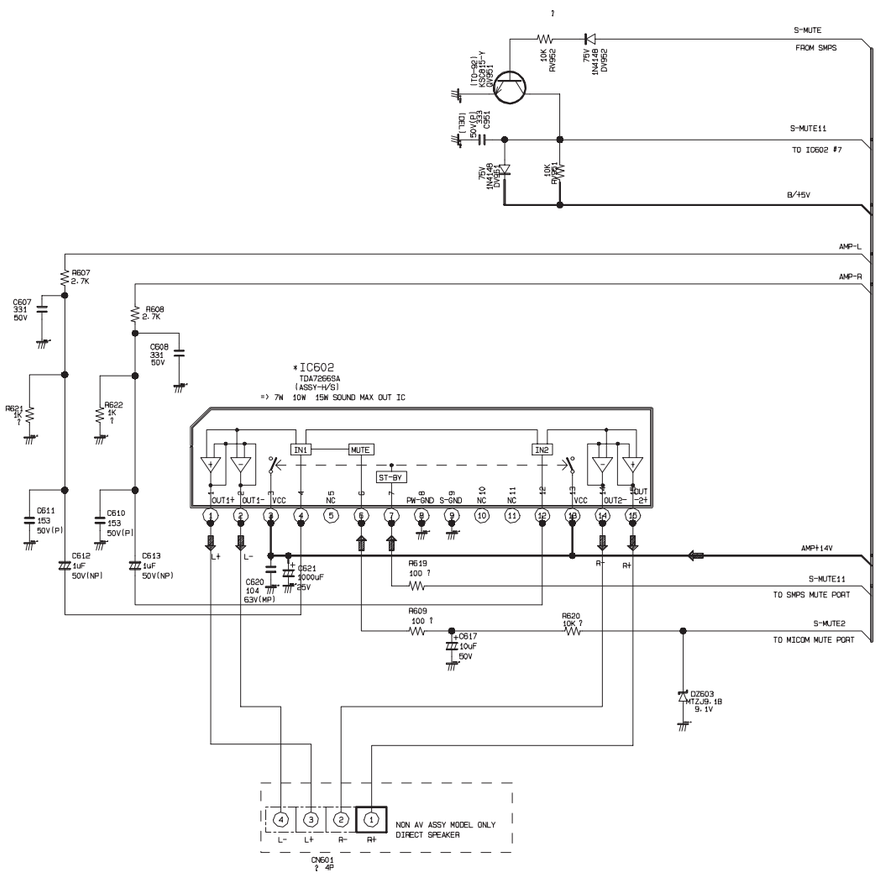


10-3 Sound

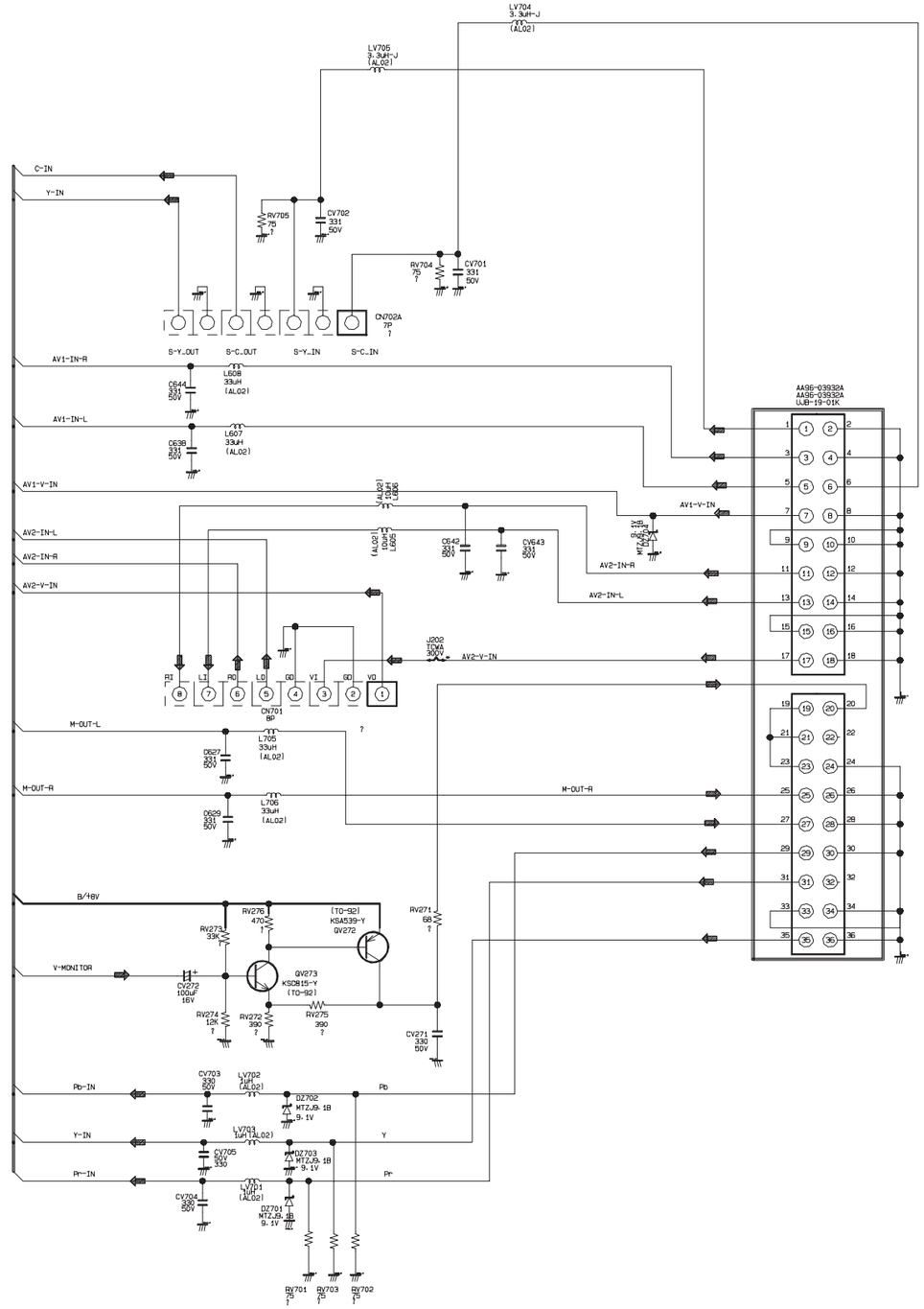
This Document can not be used without Samsung's authorization.



PIP MODULE(TDA9488) BLOCK



SOUND OUTOUT & JACK BLOCK

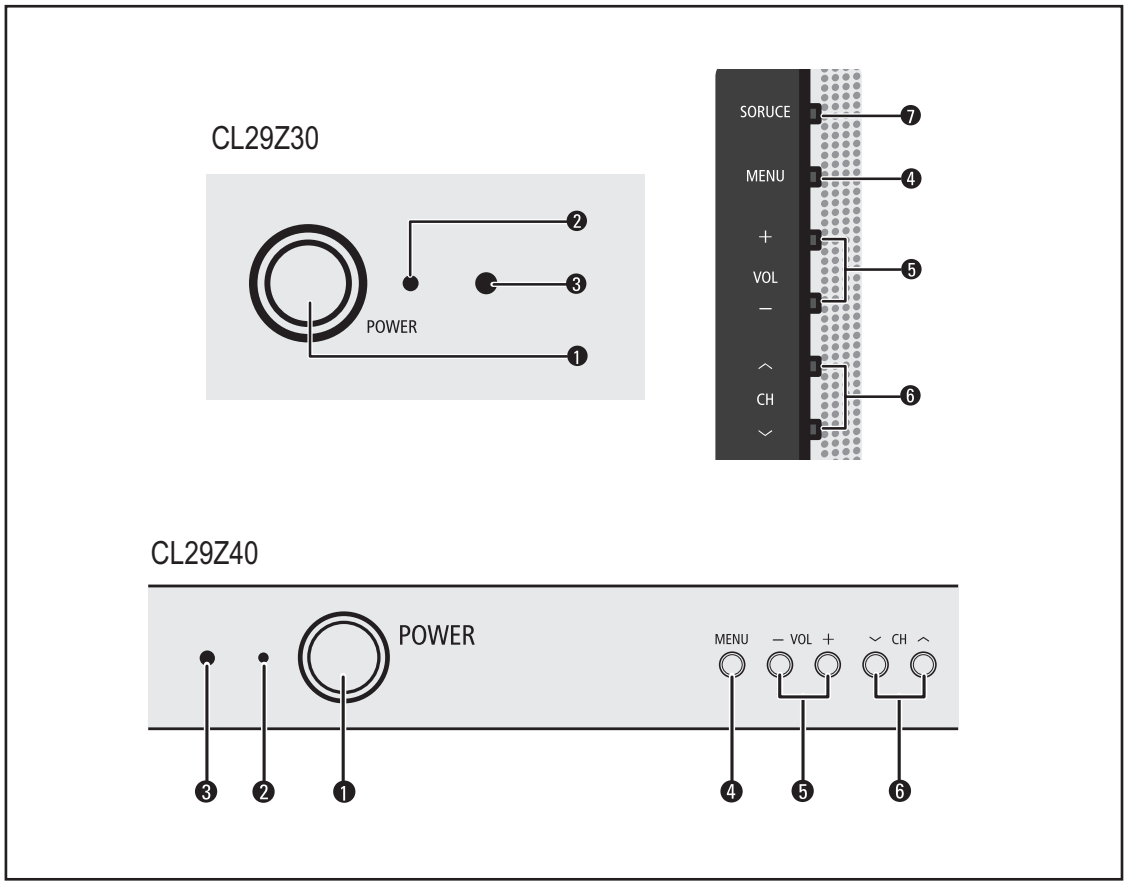


11. Operation Instruction & Installation

11-1 Product Features and Functions

11-1-1 Front Panel Buttons

The buttons on the lower-right panel control your TV's basic features, including the on-screen menu. To use the more advanced features, you must use the remote control.



1 POWER
Press to turn the TV on and off.

2 Power Indicator
Blinks and turns off when the power is on and lights up in stand-by mode.

3 REMOTE CONTROL SENSOR
Aim the remote control towards this spot on the TV.

4 MENU
Press to see an on-screen menu of your TV's features.

5 + VOL –
Press to increase or decrease the volume.
In the on-screen menu, use the + VOL – button as you would use the œ and √ button on the remote control.

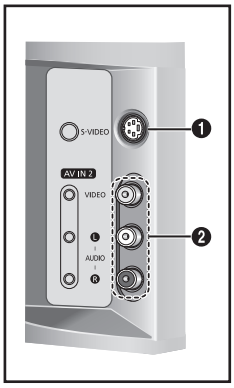
6 ∧ CH ∨
Press to change channels.
In the on-screen menu, use the ∧ CH ∨ button as you would use the ... and † button on the remote control.

7 SOURCE
Toggles between all the available input sources (TV, AV1, AV2, S-Video, Component).

In the on-screen menu, use this button as you would use the ENTER button on the remote control.

11-1-2 Connection Jacks (Side)

Use the left side panel jacks to connect a component that is used only occasionally, such as a camcorder or video game.

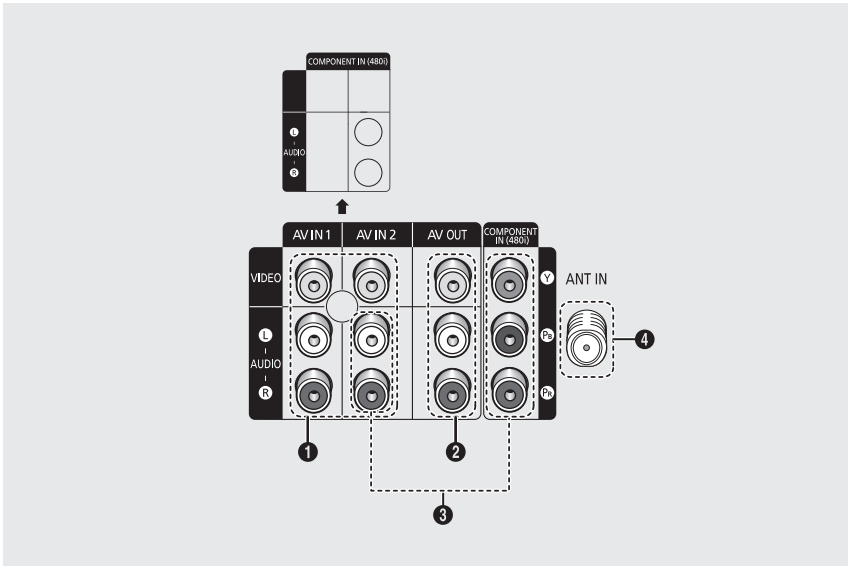


1 S-VIDEO
Video inputs for external devices with an S-Video output.

2 AV IN 2
Video and audio inputs for external devices.

11-1-3 Connection Jacks (Rear)

Use the rear panel jacks to connect A/V components that will be connected continuously, such as VCR or DVD players.



1 AV IN 1, 2
Connect to the video output jacks of VCRs, DVD players and similar devices.

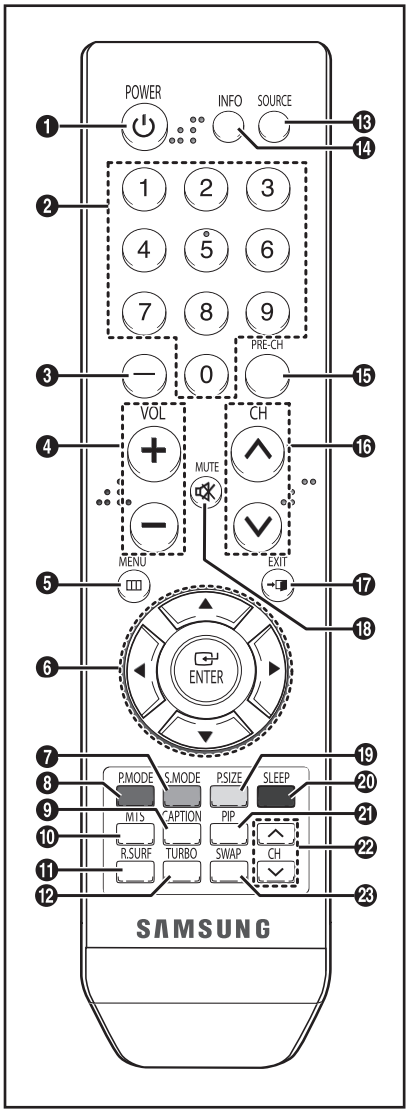
2 AV OUT
Connect to the audio/video input jacks of a recording VCR.

3 COMPONENT IN (480i)
Connect to the Component audio and video outputs of a DVD or DTV set-top box. 480i video signal input is available.

4 ANT IN
Connect to an antenna or cable TV system.

11-1-4 Remote Control

You can use the remote control up to a distance of about 23 feet from the TV. When using the remote control, always point it directly at the TV. You can also use your remote control to operate your VCR, Cable box, DVD player, or Set-Top Box.



1 POWER
Turns the TV on and off.

2 NUMERIC BUTTONS
Press to change the channel.

3 –
Use to select a channel over 100, For example, for channel 122, press "-", then "2", then "2".

4 + VOL –
Press to increase or decrease the volume.

5 MENU
Displays the main on-screen menu.

6 UP▲ / DOWN▼ / LEFT◀ / RIGHT▶ / ENTER
Use to select on-screen menu items and change menu values.

7 S.MODE
Press to select the sound mode.

8 P. MODE
Press to select the picture mode.

9 CAPTION
Controls the caption decoder.

10 MTS
Press to choose stereo, mono or Separate Audio Program (SAP broadcast).

11 R.SURF
Press to automatically return to a preferred channel after a user-preset time delay.

12 TURBO
Press to select Turbo sound.

13 SOURCE
Press to display all of the available video sources.

14 INFO
Press to display information on the TV screen.

15 PRE-CH
Tunes to the previous channel.

16 ∧ CH ∨
Press to change channels.

17 EXIT
Press to exit the menu.

18 MUTE
Press to temporarily cut off the sound.

19 P.SIZE
Press to change the screen size.

20 SLEEP
Press to select a preset time interval for automatic shut off.

21 PIP (depening on the model)
Picture-in Picture ON/OFF.

22 CH (depening on the model)
Displays the available channels in sequence. (These buttons change channels in the PIP window only.)

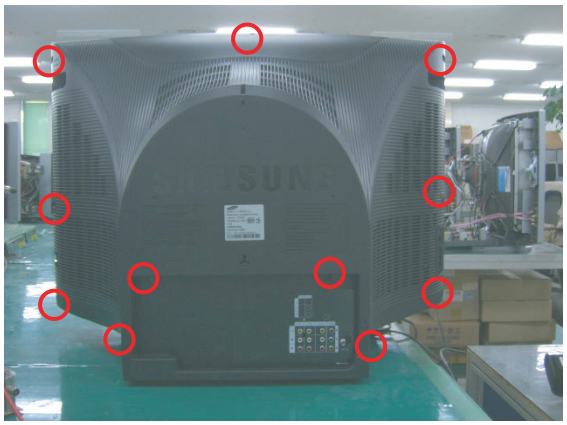
23 SWAP (depening on the model)
Switches the main and sub (PIP) picture.

➢ This is a special remote control for the visually impaired, and has Braille points on the Power, Channel and Volume buttons.

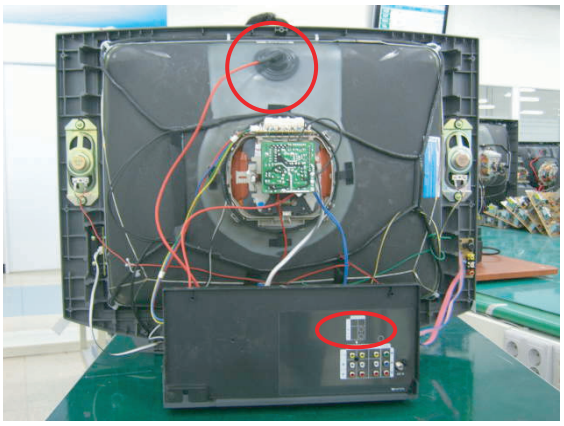
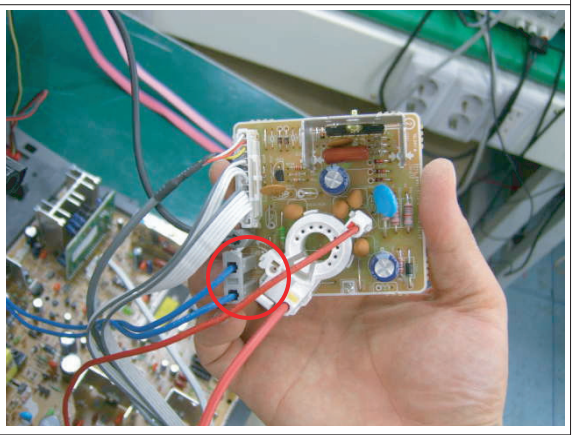
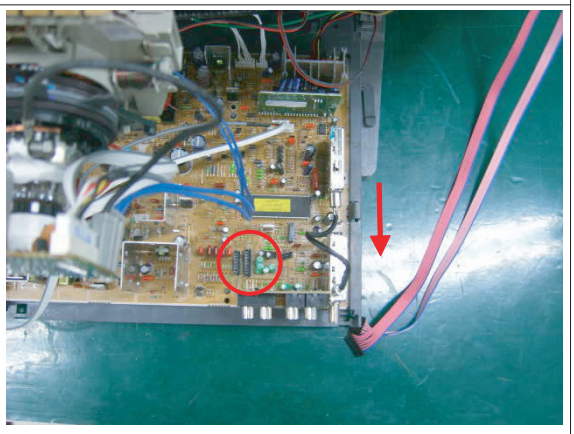
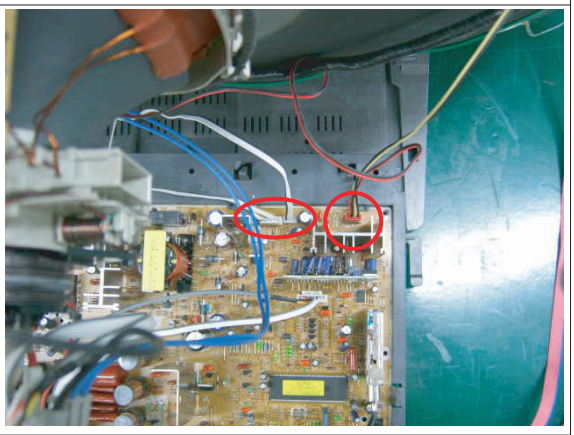
12. Disassembly & Reassembly

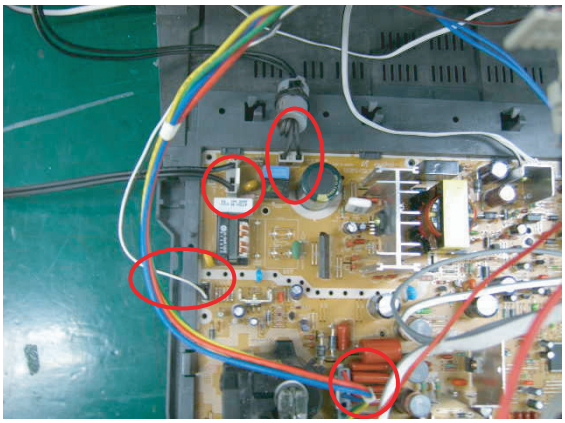
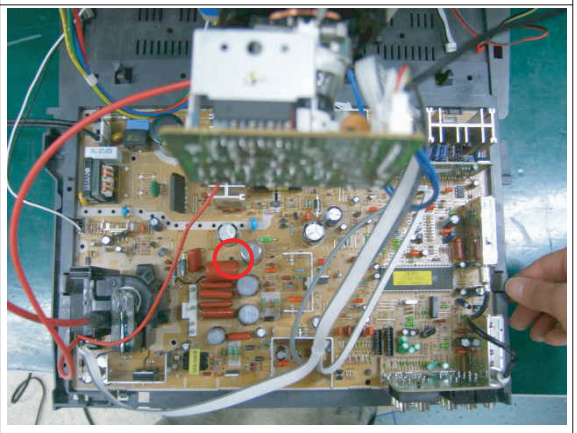
12-1 Overhaul Disassembly & Reassembly

12-1-1 Disassembling the Cabinet

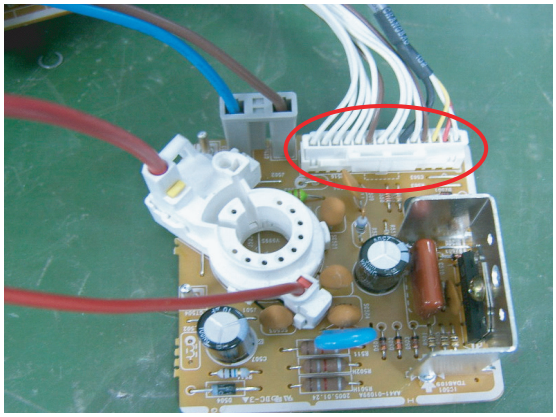
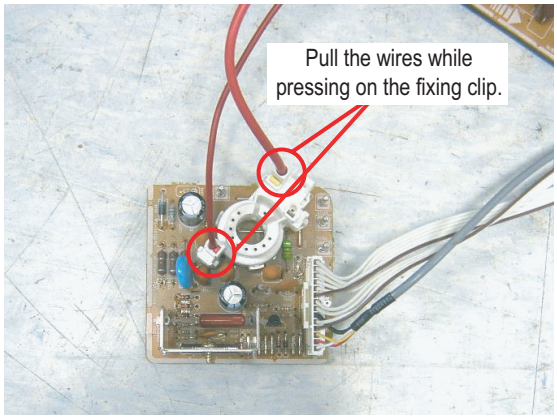
Part Name	Description	Description Photo
Back Cover	① Remove the 9 screws fixing the Back Cover. : RH, +, B, M4, L15, ZPC(BLK), SWRCH18A ② Tap the upper part of the Back Cover 2 or 3 times and pull the Back Cover to separate it from the unit. ⚠: Disassemble the product after disconnecting the power cord and discharge the unit to prevent an electric shock and damage to the product due to static electricity.	

12-1-2 Disassembling the CRT and Chassis

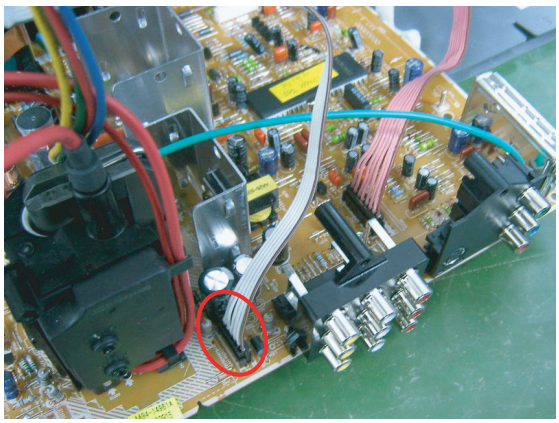
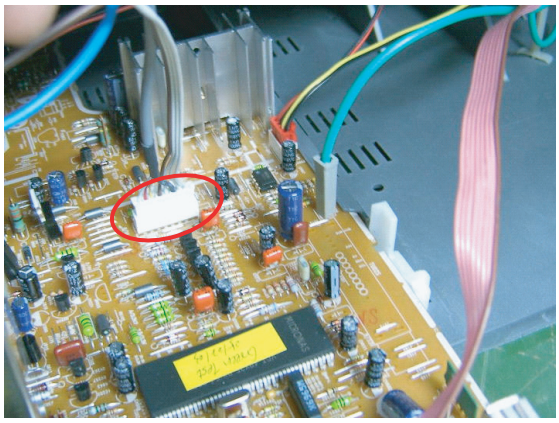
Part Name	Description	Description Photo
Chassis Holder	① Remove the screw,and Separate the Terminal Board. ② Separate the cables connecting the FBT and the CRT. ⚠ : Since there may be a remaining high-voltage current within the CRT, take care not to touch the CRT hole with metal or a part of yourself when separating the cables.	
	① Separate the CRT Ass'y from the CRT. ② Separate the TBC wire, cables from the CRT Ass'y sequentially.	
	① Separate the Side AV Wire from the Front Cabinet and the Main Board. ② Pull Holder Chassis like the picture arrowdirection.	
	① Separate the Control 4P Wire,6P Wire,Speaker Wire from the Front Cabinet and the Main Board.	

Part Name	Description	Description Photo
Chassis Holder	① Separate the Power cord,D-COIL,TILT,DY connector from Main Board	
	① Remove the screw.	

12-1-3 Disassembling the CRT Ass'y

Part Name	Description	Description Photo
CRT Ass'y	① Separate the cables from the Main Board and CRT Ass'y	
	① Separate the wires from the FBT of the Main Board and the CRT Ass'y. ② To separate the thick red wires, pull the wires while pressing the push-type clip at the connector. ③ To separate the thin red wire, insert a pin in the small hold next to the hole and pull the wire. ⚠: Take care when separating the wires because pulling the wires by force may damage the socket. In addition, separate the wires on a flat and clean surface so as to prevent scratching of the material and the PCB.	

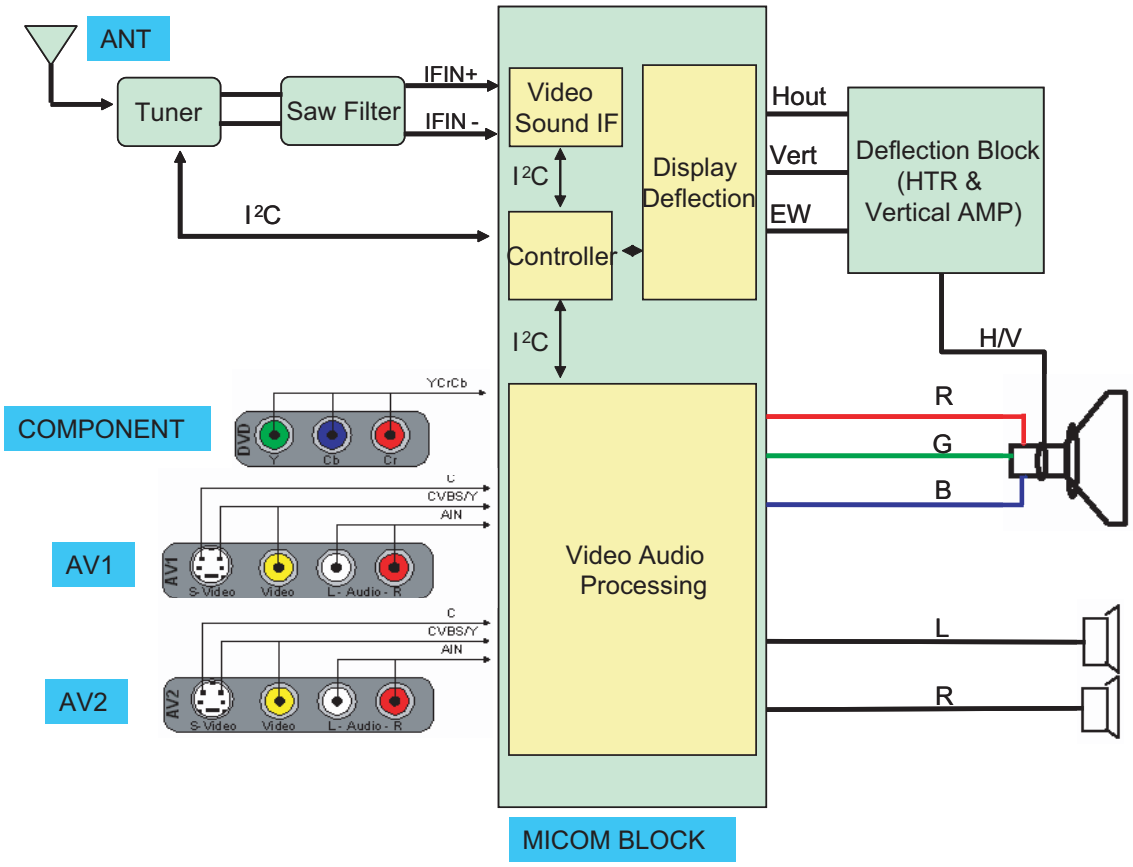
12-1-4 Disassembling the Main Board

Part Name	Description	Description Photo
Main Board	① Separate the cable from the Main Board.	
	① Separate the cable from the Main Board.	

MEMO

13. Circuit Description

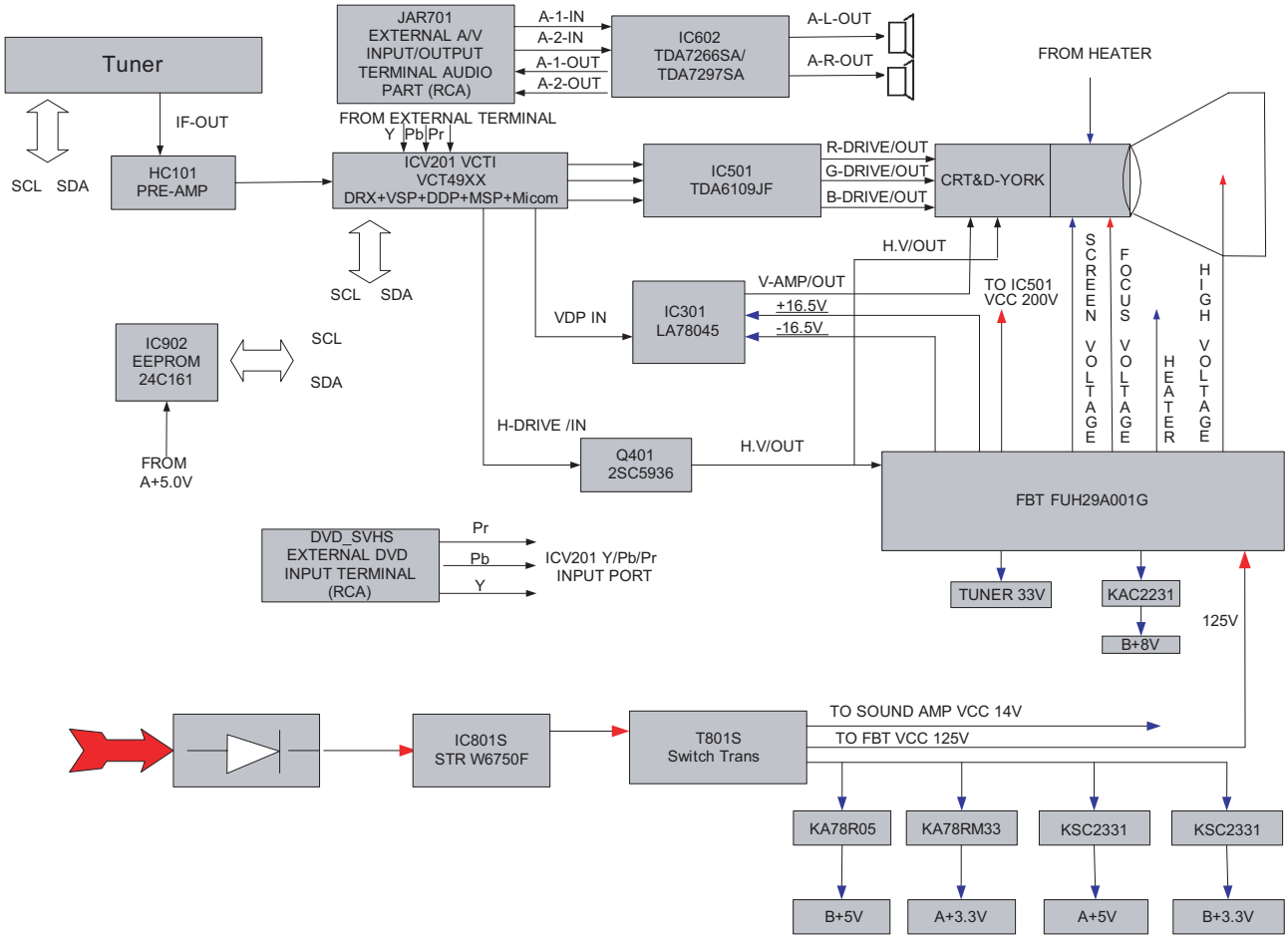
13-1 Overall Block Description



* The functional part of a direct view type TV consists of the System, Deflection and Power parts.
* The Assy's are classified by the corresponding functions, by adopting GREEN CRT.
* The Power Block is different from the KS7A's in the power supply chip. STR and TRANS have been changed. Assy's has been changed too.
* The System Block is looked similar to that for the existing model (KS7A).
* The AV signal is input through the AV port and Side AV port of the System Block.
* The audio signal is processed as same as for KS7A'S.
* Micom Block is same as the KS7A'S in the hartware. But it is different from KS7A'S in the software.
* The Deflection Block is consists of the CRT Driver part of the System Block, the CRT Assy part and the Deflection Block controls the all of the deflection.
* Micom Block consists of five aspects as: Video & Sound IF Processor,Sound Processor, Video Processor, Display and Deflection Processor and Controller, OSD,Text Processing.
* TDQ-6F/13F2S (Tuner): RF signal processing, output IF signal.

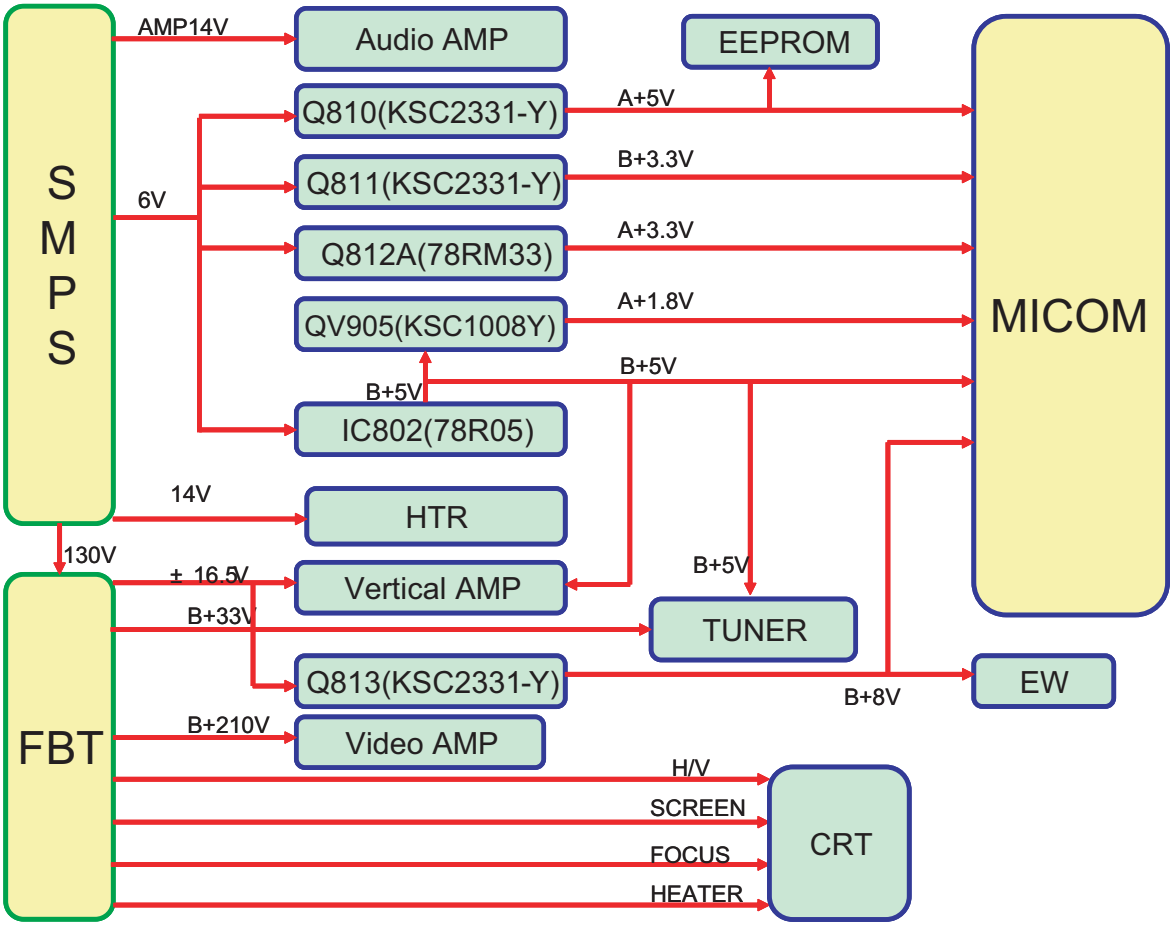
13-2 Partial Block Description

13-2-1 System Board Block Description



* VCT4953: DRX+VSP+MSP+TVT. It contains the entire IF, audio, video, display and deflection processing for 4:3 and 16:9 50/60Hz mono and stereo TV sets. The integrated microcontroller is supported by a powerful OSD generator with integrated Teletext and CC acquisition including on-chip page memory.
* 2SC5936: Inputed H-DRIVE signal which comes from VCT4953.It amplify the H-DRIVE then output to Deflection Yoke.
* LA78045: Inputed VDP signal which comes from VCT4953.It amplify the VDP then output to Deflection Yoke.
* TDA7266SA/TDA7297SA: It is a dual channel audio amplifier.The two audio signals L and R input to it and are amplified, then output to speaker.
* TDA6109JF: It includes three video output amplifiers and is intended to drive the three cathodes of a color CRT directly. The output R、G、B signals will connect to the CRT socket pins directly.
* EEPROM: As a extended ROM of TVT. It contains some data which is used to program executing.
* STR W6750F: SMPS control HIC. Provide switching signal in order to control the trans working.
* TDQ-6F/13F2S(TUNER): Receives the RF signal and output a fixed IF to Micom.

13-2-2 Power Block



13-2-3 IC Line Up

■ Main Board

Items	Descriptions	Remarks
MICOM	VCT4953_F1 Micronas	
Tuner	TECC1040SL32A(E),XUGUANG	
BRIDGE DIODE	GSIB460,VISHAY	
Trans Switching	42B135,DK	
STR	STR-W6750F,SANKEN	
FET	FQP630TSTU,FAIRCHILD	
Vertical DEF.	LA78045,SANYO	
Horizontal DEF.	2SC5936M,MATSUSHITA	
SOUND AMP	TDA7297SA, SGS-TOMSON	10W+10W
SOUND AMP	TDA7266SA, SGS-TOMSON	7W+7W
EEPROM	24C161,SAMSUNG	
VIDEO AMP	TDA6109JF, Philips	
Regulator	78R05	B+5V Regulator
Regulator	78RM33	A+3.3V Regulator
Regulator	KSC2328A-Y	A+5V Regulator
Regulator	KSC2331-Y	B+3.3V Regulator

14. Reference Information

14-1 Option Byte

Green KS7B	Model	VOLT	Master S/W	Tact S/W	Tilt	VM	PIP	X-Ray	DNIe -Jr	21" Ear-Phone	BACK S-VIDEO	SIDE S-VIDEO	LNA	A/V Multi (Philippine)	Remocon (AA59-)	Sound Output	Micom	Energy Star	TIMER/ ST-BY	Remark
Korea	CT-29K10V	AC220V	0	x	x	x	x	X	x	X	0	X	X	X	TM75 00317A	7W x2	AA97-16044A T_TGNNKU_1000	X	ST-BY	
	CT-29M20V	AC220V	0	x	x	x	x	X	x	X	0	X	X	X		7W x2		X	ST-BY	
	CT-29M16V	AC220V	0	x	x	x	x	X	x	X	0	X	X	X		7W x2		X	ST-BY	
	CT-29K12V	AC220V	0	x	x	x	x	X	x	x	0	X	X	X		7W x2		X	ST-BY	
	CT-29K6V	AC220V	0	x	x	x	x	X	x	x	0	X	X	X		7W x2		X	ST-BY	
USA CANADA	TXR2728GX/XAA	AC120V	x	0	X	x	x	0	x	x	0	X	X	X	TM75 00316B	7W x2	AA97-16044A T_TGNNKU_1000	O	Timer	
	TXR2728GX/XAC	AC120V	x	0	X	x	x	0	x	x	0	X	X	X						
PANAMA	CL29M16MQDXXAP	AC220V	x	0	X	x	x	0	x	x	0	X	X	X	TM75 00316B	10W x2	AA97-16044A T_TGNNKU_1000	X	Timer	
MEXICO	CL29M16MQDXXAX	AC120V	x	0	x	x	x	x	x	x	0	X	X	X	TM75 00316B	10W x2	AA97-16044A T_TGNNKU_1000	O	Timer	
Others Latin	CL29M16MQDXGSU	Free Volt	x	0	x	x	x	x	x	x	0	X	X	X	TM75 00316B	10W x2	AA97-16044A T_TGNNKU_1000	X	Timer	
	CL29M16MQDXSTR	Free Volt	x	0	x	x	x	x	x	x	0	X	X	X		10W x2		X	Timer	
	CL29M16MQDXXAO	Free Volt	x	0	x	x	x	x	x	x	0	X	X	X		10W x2		X	Timer	
	CL29M16MQDXRCL	Free Volt	x	0	X	x	x	x	x	x	0	X	X	X		10W x2		X	Timer	

14-2 Technical Terms

Mono
A type of audio interface that transmits audio signals through a single channel.
Through a mono interface, it is hard to experience stereophonic sound and sound is played only by one speaker.

Reception Sensitivity Amplification
A signal amplification technique that amplifies weak broadcasting signals by applying satellite technology to provide a better visual quality even for users in regions where only weak broadcasting signals are available.

Stereo
A type of audio interface that transmits audio signals through 2 channels.
Stereo transmits audio signals for the right and left channels so that you can experience stereophonic sound, and the sound is played with 2 speakers.

English Caption
A function that shows English caption or text information included in the broadcasting signal or video tape. You can use this function to study English by watching AFKN or CC marked video tapes.

Video/Audio Ports
You may experience poor visual and audio quality when watching a video tape on channel 3 or 4 through the antenna cable. You can experience better visual and audio quality connecting the TV and VCR through the Video/Audio ports. The video port is distinguished by the color yellow, and the audio ports are distinguished by the white (left) and red colors (right).

External Input
External Input is connecting video devices such as a VCR, camcorder, DVD, etc. as a video source.

Satellite Broadcast
Satellite Broadcast transmits programs via satellite so that the broadcast is viable in all areas at a high visual and sound quality. It provides approximately 100 channels including public broadcast channels. To view satellite broadcast, you have to install an additional receiver.

Wired Broadcast
Satellite Broadcast refers to movie, entertainment and educational programs transmitted by the broadcasting station in a hotel or school.

Audio Multimix
Audio Multimix provides 2 languages for audio when broadcasting a foreign movie, drama, news, etc. You can select and listen to one of the supported languages or you can select and listen to both languages simultaneously.

Component Port (Green, Blue, Red)
The Component Port separately transmits the luminance signal and provides the best quality of all video connection types.

Cable Broadcast
Cable Broadcast transmits programs via cable instead of radio wave. To view a cable broadcast, you need to subscribe to your local cable broadcast service provider and install an additional receiver.

Tuner
RF signal processing , output IF signal.

DVD (Digital Versatile Disc)
DVD is a large capacity media that can save multimedia content such as video, game, audio applications, etc. using MPEG-2 video compression technology on a CD-sized disc.

S-VIDEO IN Port
This is called super video. S-Video is a type of video signal which has the video luminance and color signals separated in order to provide a better visual quality.

VHF/UHF
VHF refers to TV channels 2 to 13, and UHF refers to TV channels 14 to 69.

Turbo sound
Turbo sound emphasizes the bass and treble frequencies to add fullness to the sound.
Turbo Plus : It can strength the bass while enjoying music and movies.
Voice : It can enhance the speech signal,such as leaving clear voice, when watching the News,Drama and Documentary etc.